



CONTENTS

	PAGE.
A Charming House and Grounds (Illustrated)	1
Residence of B. van H. Schultz, Esq. Wilson Eyre, Architect	
Additions to Chicago's Skyline (Illustrated)	15
A Few Recent Skyscrapers. Peter B. Wight	
The Evolution of Architectural Ornament (Illustrated)	25
V.—The Gothic School of European Continent. G. A. T. Middleton, A. R. I. B. A.	
Paris School Days (Illustrated)	37
How the Student Lives and Works at the Ecole des Beaux Arts. George S. Chappell	
The Country Gentleman's Art (Illustrated)	42
Specifications for Landscape Gardening. George F. Pentecost, Jr.	
The Suburban Residence of the Pacific Northwest (Illustrated)	51
A Few Recent Examples.	
Contemporary Apartment Building in New York City.. (Ills.)	61
H. W. Frohne	
Notes and Comments	71

PUBLISHED BY

THE ARCHITECTURAL RECORD COMPANY

President, CLINTON W. SWEET

Treasurer, F. W. DODGE

Vice-Pres. & } H. W. DESMOND

Secretary, F. T. MILLER

Genl. Mgr., }

11-15 East Twenty-fourth Street, Manhattan

Telephone, 4430 Madison Square

Subscription (Yearly) \$3.00

Published Monthly

Copyright, 1910, by "THE ARCHITECTURAL RECORD COMPANY." All rights reserved.

Entered May 23, 1903, as second-class matter, Post Office at New York, N. Y., Act of Congress of March 24, 1879



APPROACH TO BREAKFAST PORCH FROM THE GARDEN—
B. VAN H. SCHULTZ RESIDENCE.

Short Hills, N. J.

Wilson Eyre, Architect.



A CHARMING HOUSE AND GROUNDS

Residence of B. van H. Schultz, Esq.

WILSON EYRE, Architect

(Photos by JULIAN BUCKLY)

An increasing number of very genuine personal successes are being made by architects, not merely because they have designed conspicuous buildings, but because their work is absolutely their own and is so recognized. That their personal style, however, is different, the one from the other, is emphatic and unmistakable. Their work is characterized by the right kind of integrity and distinction. They exercise a profound influence upon the architecture in their vicinity by affording desirable models for inspiration and by educating a small but influential part of the public in a better understanding of the rights and responsibilities of an architect in relation to his client.

Whether any particular house is a great success depends, somewhat, upon conditions, including a happy inspiration on the part of the designer. American domestic architecture in its later development shows a closer approach to the goal of consummate design. The average American business man brings a much more liberal group of ideas to the building of his house than he once did and his architect, in consequence, is better able to do himself justice.

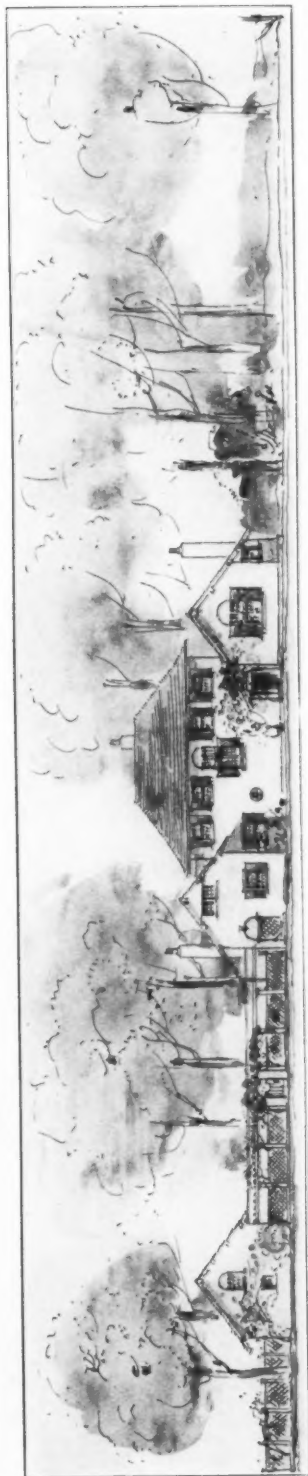
The architect chosen because the client is attracted to him by a genuine admiration of his past achievements and who strengthens this admiration after personal acquaintance and confidence should have an incentive to do his best work, and we find many examples, including the house published herewith, to prove that the architect so chosen does do excellent work.

To this end it can be clearly pointed out that improvement in American domestic architecture can be helped by the popularization of the works of the better American architects. Knowledge of the work of leading architects will help us to discriminate intelligently between the good and bad and between a good building of one type and an equally good example in another style.

In the residence of Bernard van H. Schultz, Esq., at Short Hills, N. J., we see the personal success of Mr. Wilson Eyre as an architect. This is distinctly an "Eyre" house, original and well suited to the surroundings and to the requirements of the clients. The site presented unusual difficulties and also unusual opportunities. The first thought, perhaps, was

Copyright, 1910, by "THE ARCHITECTURAL RECORD COMPANY." All rights reserved.

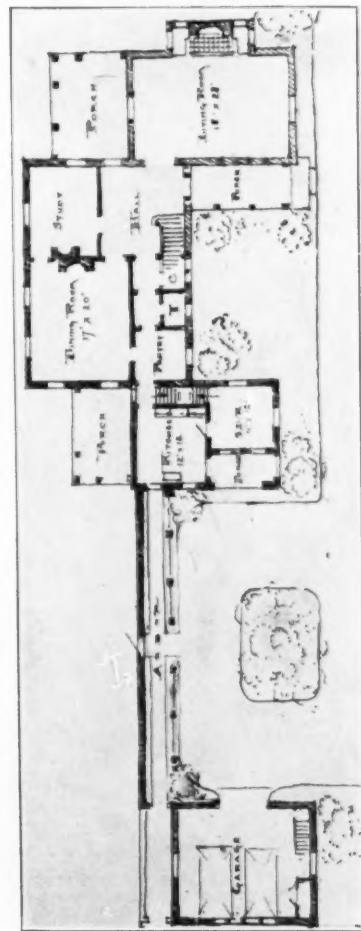
Entered May 23, 1903, as second-class matter. Post Office at New York, N. Y., Act of Congress of March 3d, 1879.



THE ARCHITECT'S FIRST STUDY—B. V. H. SCHULTZ RESIDENCE.
(Reduced photographically from a 1-16-inch scale sketch.)

Short Hills, N. J.

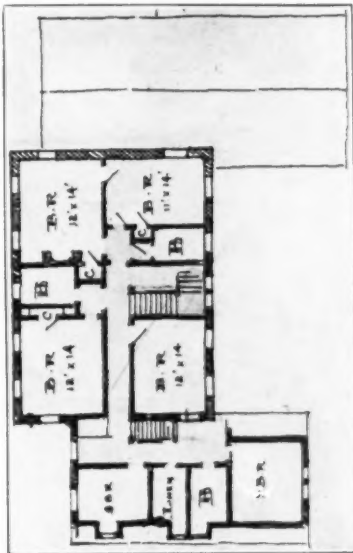
Wilson Eyre, Architect.



First Floor Plan.

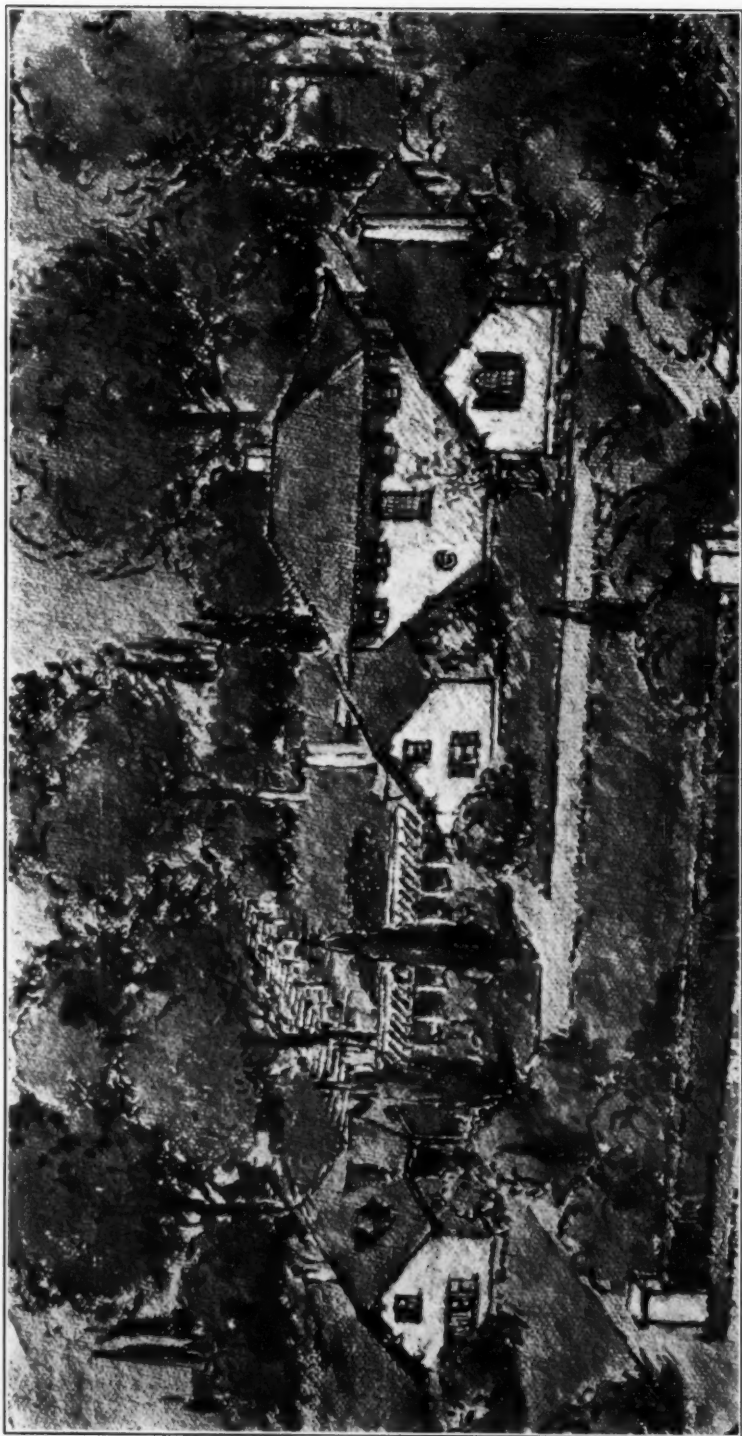
B. V. H. SCHULTZ RESIDENCE.

Short Hills, N. J.



Second Floor Plan.

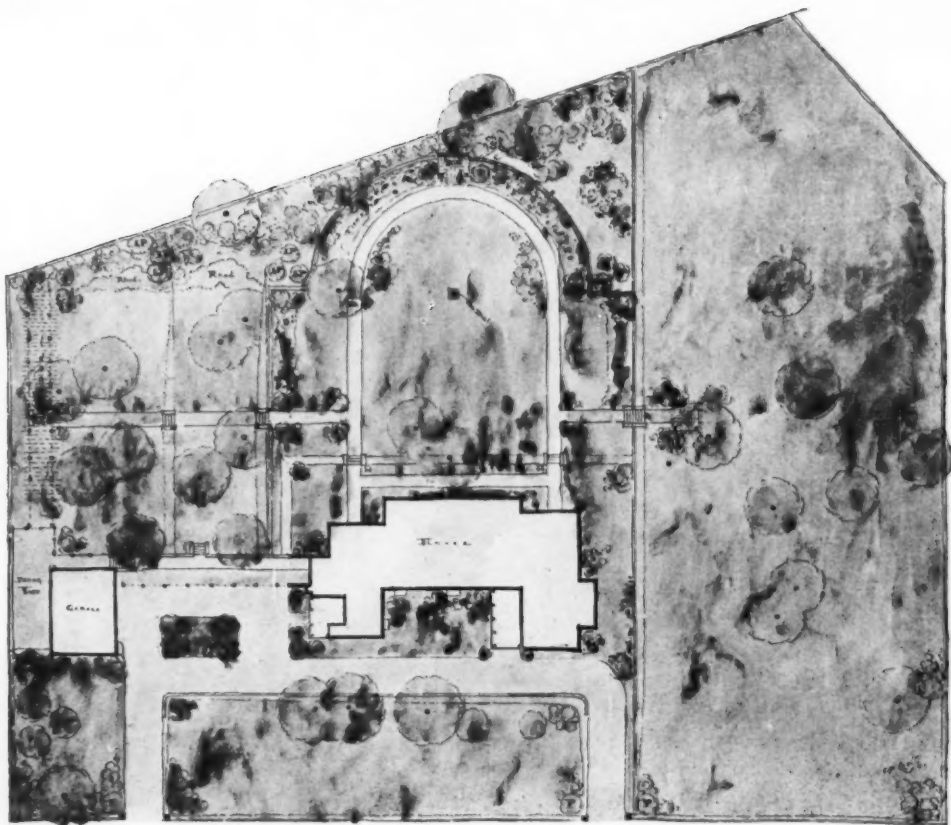
Wilson Eyre, Architect.



PERSPECTIVE VIEW—B. V. H. SCHULTZ RESIDENCE.

Wilson Eyre, Architect.

Short Hills, N. J.



GARDEN PLAN—B. V. H. SCHULTZ RESIDENCE.

Short Hills, N. J.

Wilson Eyre, Architect.

to place the house on the high position of the ground, but this idea was abandoned and the architect was most fortunate in having a client who was prepared to meet him more than half way in his ideas. Much to the amusement of the neighborhood, a hole was dug in the side of the bank and the house built into it. The grading was then graduated from this point, making the various terraces necessary and, we think, most attractive. This was by no means the least expensive method of developing the property, but the results obtained fully warranted this way of doing the work.

The general massing of the house provides for a central building of two and a half stories, with two wings. The right wing is one story high, while the left wing is devoted to the servants' quar-

ters. A garage in keeping with the general scheme is located on the property line.

The main portion of the house includes a large hall running across the entire length, the study and dining room.

The living room, hall, study and dining room all open into the garden through a loggia at each end of the building.

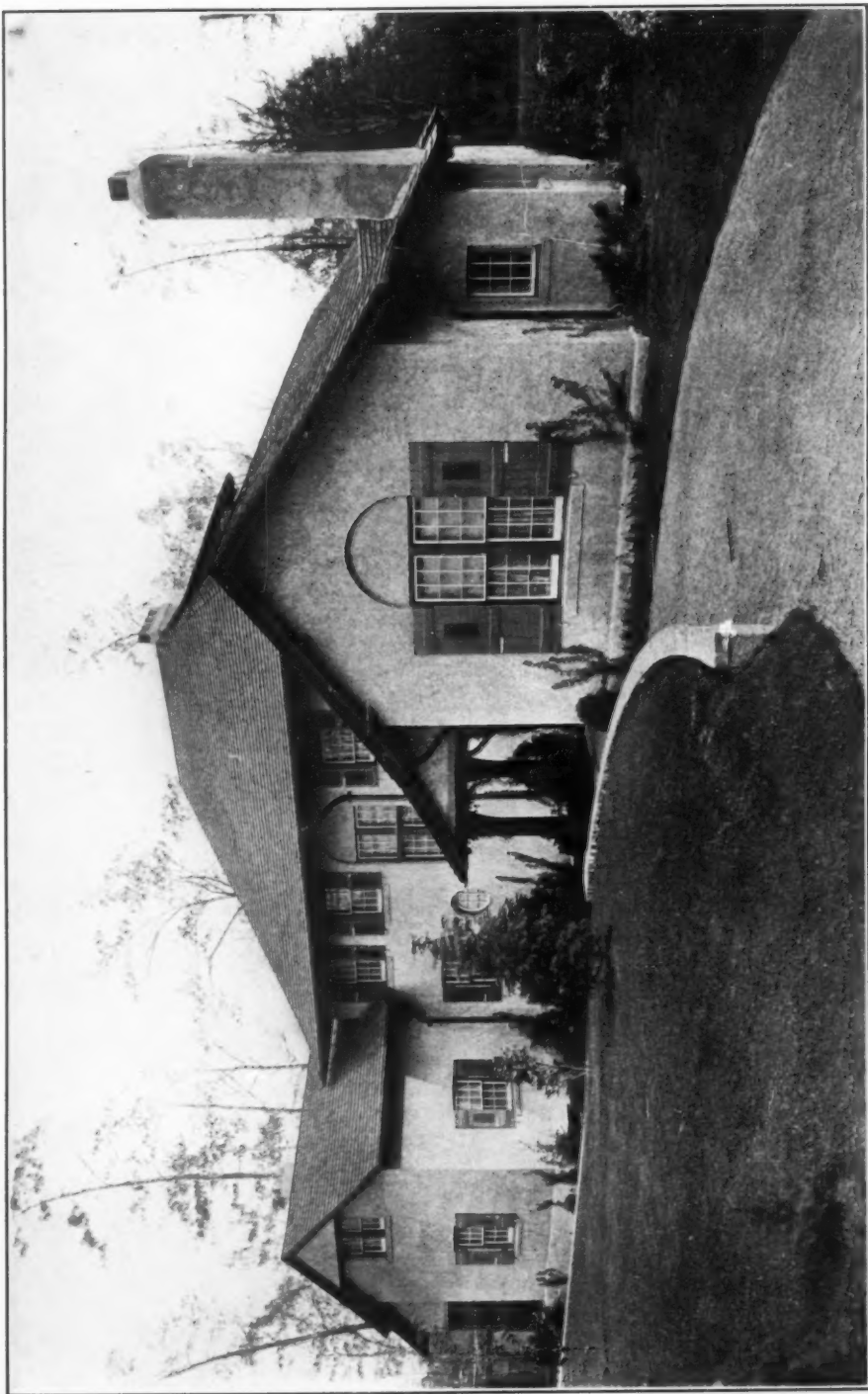
The living room has been designed to meet the peculiar needs of the clients. It is one story high carried up into the roof. The walls are covered to a partial height with old wainscoting, the upper decorative panels and ornamental ribs of which were found in an old monastery near Venice. The plain lower panels and base are of new work carefully scraped and toned to match the old. The ceiling and walls above wainscot are



VIEW FROM UPPER TERRACE—B. V. H. SCHULTZ RESIDENCE.
Short Hills, N. J. Wilson Eyre, Architect.



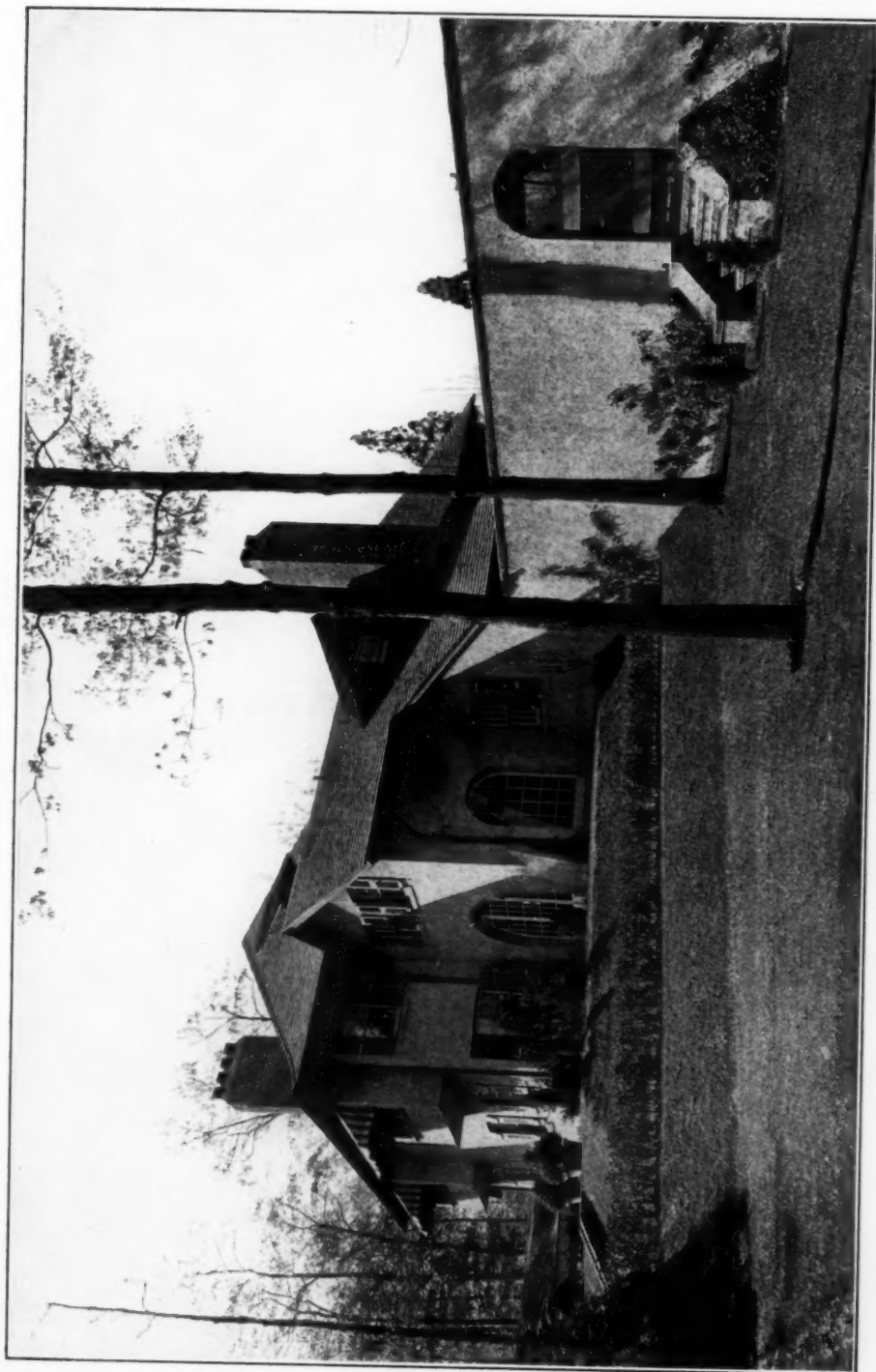
VIEW FROM LOWER PERGOLA—B. V. H. SCHULTZ RESIDENCE.
Short Hills, N. J. Wilson Eyre, Architect.



ENTRANCE FRONT—B. V. H. SCHULTZ RESIDENCE.

Short Hills, N. J.

Wilson Eyre, Architect.



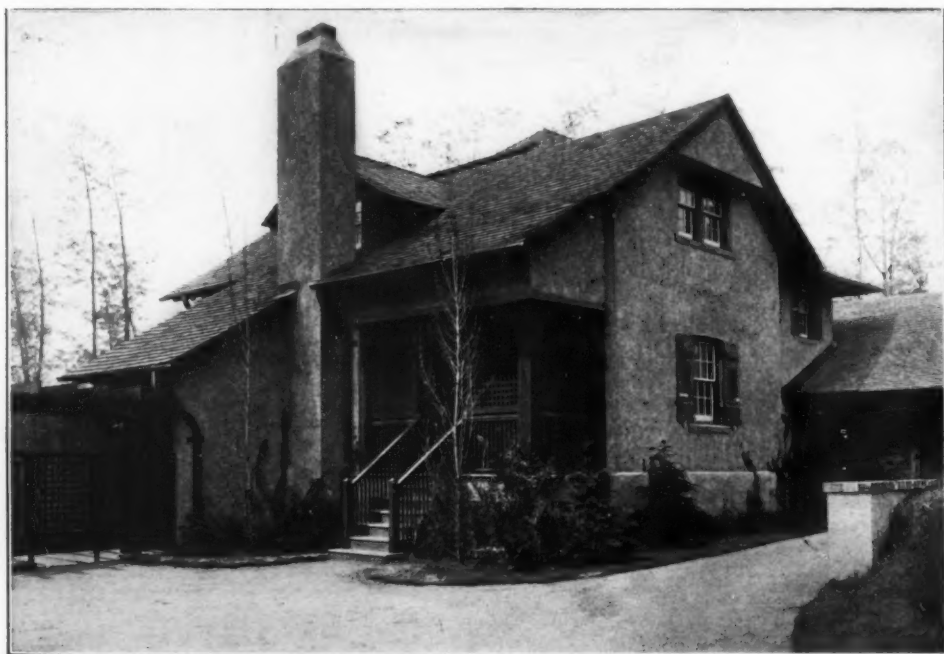
THE GARDEN WALL AND LOWER TERRACE—B. V. H. SCHULTZ RESIDENCE.

Short Hills, N. J.

Wilson Eyre, Architect.



Short Hills, N. J. SOUTH PORCH—B. V. H. SCHULTZ RESIDENCE. Wilson Eyre, Architect.



Short Hills, N. J. SERVANTS' WING—B. V. H. SCHULTZ RESIDENCE. Wilson Eyre, Architect.

rough plaster of light brown tint, carrying out the true slope of the roof rafters.

In the rear of the house, overlooking the garden, is the study. Rather unique bookcases are built out into the room. The door finish is built to face of bookcases, making the trim project into the room with a cornice over the top. The published drawing and photograph show clearly the mantel and wall treatment on

is, perhaps, particularly interesting. A decorative painting was procured and worked into the designs, as shown, and the facing tiles are old ones from Holland and tone well with the room color. A breakfast porch opens off this room, commanding a view of the garden, which is reached by a terrace.

The pantry and kitchen are in the servants' wing together with the servants'



ELEVATION FACING GARDENS—B. V. H. SCHULTZ RESIDENCE.

Short Hills, N. J.

Wilson Eyre, Architect.

one side of the study. Under the mantel shelf is an old cherub head obtained by Mr. Eyre in Florence. The facing is in Mercer tiles.

The dining room is large for a house of this size, but so designed as to be in excellent scale. The woodwork is of pine, painted several coats, then tinted and wiped off, leaving the darker color only in the depth of moulds, etc. The wall is tinted a soft green. The mantel

dining room, ice chest room and rear porch.

The bedrooms, baths and servants' rooms are on the second floor.

The land is divided into four terraces. On the upper one is a grove with small fruit gardens, with a rough cedar summer house overlooking the garden below. The second terrace contains the formal garden, with sun dial and summer house. The third level is a lawn



ARCHITECT'S SKETCH FOR LIVING ROOM—B. V. H. SCHULTZ RESIDENCE.

Short Hills, N. J.

Wilson Eyre, Architect.



LIVING ROOM—B. V. H. SCHULTZ RESIDENCE.

Short Hills, N. J.

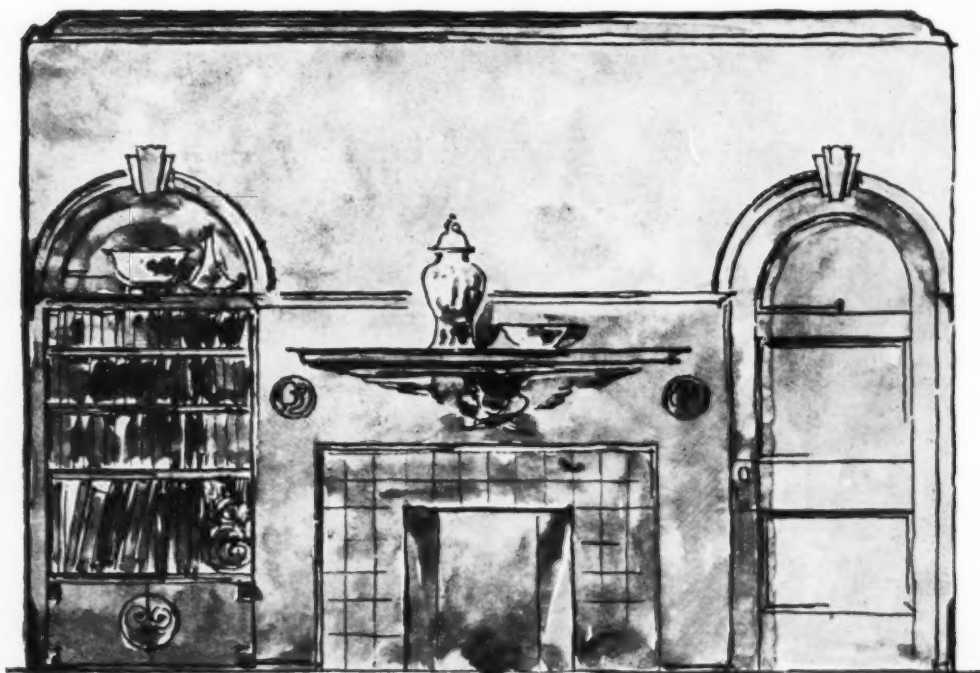
Wilson Eyre, Architect.



ARCHITECT'S SKETCH FOR DINING ROOM—B. V. H. SCHULTZ RESIDENCE.
Short Hills, N. J. Wilson Eyre, Architect.



DINING ROOM—B. V. H. SCHULTZ RESIDENCE.
Short Hills, N. J. Wilson Eyre, Architect.



ARCHITECT'S SKETCH FOR STUDY—B. V. H. SCHULTZ RESIDENCE
 Short Hills, N. J. Wilson Eyre, Architect.



STUDY—B. V. H. SCHULTZ RESIDENCE.
 Short Hills, N. J. Wilson Eyre, Architect.



ARCHITECT'S SKETCH OF DINING ROOM—B. V. H. SCHULTZ RESIDENCE.
 Short Hills, N. J. Wilson Eyre, Architect.



ARCHITECT'S SKETCH OF HALL—B. V. H. SCHULTZ RESIDENCE.
 Short Hills, N. J. Wilson Eyre, Architect.

sheltered by large trees and the fourth terrace contains a pergola acting as a boundary to the property.

The garden is separated from the street by a stucco wall with an arbor on the street side by which the garage is connected to the house.

It must be noted that the house throughout has been specially detailed, not a single opportunity having been missed to make the house individual. The lighting fixtures are all in good taste and in keeping with the design.

The shutters on the ground floor level are especially interesting. They are made of small board sheathing on battens with very small louvres in the central portion.

They are painted green, the roof, eaves, etc., a soft dark brown, and the stucco a very faint suggestion of color, toning with the brown roof.

The material used in the construction of the house is brick, covered, as mentioned, with stucco free from ornamentation.

The reader will find by a close study of the drawings and photographs published that the house has the happy merit of looking like the architects sketches and that it may be classed among the successes in recent domestic architecture. It is, we believe, a correct inference from this showing that the standard is slowly but steadily improving.



Short Hills, N. J.

A BIT OF DETAIL—B. V. H. SCHULTZ RESIDENCE.

Wilson Eyre, Architect.

ADDITIONS TO CHICAGO'S SKYLINE

A Few Recent Skyscrapers

PETER B. WIGHT

Chicago is sometimes spoken of as the birthplace of the skyscraper, but a newspaper correspondent has recently said that he found twelve-story buildings in Genoa one hundred years old—and they were inhabited buildings, not towers. Other newspaper writers are continually speaking of the wonderful height of the Singer Building and the Metropolitan at New York, but neither of them is a genuine "skyscraper." They only happen to have towers of greater height than any before attempted in connection with buildings. The Metropolitan Building has only ten stories above the street grade, counting in a mezzanine floor.

If Chicago is not the birthplace of the "skyscraper," it is the first city in which office buildings for renting purposes, ten, twelve and fourteen stories in height were built. New York was close second, and has long since surpassed Chicago both in height, number and cost of office buildings. And Chicago is not jealous.

After the three-hundred-foot-high Masonic Temple was built in Chicago, New York commenced to build higher ones, and has been doing so ever since. But they have never been popular at Chicago, except with the promoters and investors who have been able thereby to get double and treble use of the land they stand upon at the expense of their neighbors' light. I have yet to see a new skyscraper erected between two old ones in that city. It is "first come first served," and "devil take the hindmost," and the hindmost must get what income he can from his little old building, on land supposed to be equally valuable. The general opinion among the best-educated architects of Chicago (not including, of course, the three or four who have linked their fortunes with commercialized promoters) is that the high building is not only a disfigurement of the general design of the city, which it is now hopeless to efface, but that it prevents that dif-

fusion of patronage which would distribute the work into many hands, by which it could be better done; also that it is a deterrent to urban expansion. Several attempts have been made by municipal ordinances to restrict the heights of buildings in Chicago, and all have resulted in failure. To-day the height is "restricted" to 260 feet above the grade. There have been several previous restrictive ordinances. In one the limit was made 130 feet. Then it was changed to 155 feet at the behest of a politician who wanted to build to that height, after which it was changed back to 130 feet, and several were erected under that restriction. One of these parties wanted to add more stories and secured a change of the limit to 260 feet. The building went up. Since that time three well-known buildings have been built to exceed that height, though the building permits were given for plans showing a height of 260 feet only. Yet no one has protested, and the ordinance is a dead letter. No attempt has ever been made by the building department to enforce the law against these violations, because every good lawyer knows that the courts would assert the right of every property holder to build as high as he wants to, as long as he builds safely and does not interfere with the rights of any other person.

Several years ago, when the movement was started to raise the limit of height to 260 feet, interested citizens sought the influence of the Illinois Chapter of the Institute in opposition. But the Chapter, in a formal communication to the City Council, put itself on record as being opposed to skyscrapers on artistic as well as politic grounds but as being also opposed to any restrictions by law, for the reason that it could be changed at any time by the City Council, or would be violated at will without remonstrance.

So, practically, Chicago is in the same

position with respect to this matter as New York. The question of safety of foundations has been settled by the use of wells filled with concrete carried down to hard-pan or rock, and the later improvements in fireproofing have made it possible to make buildings above ground even more safe than before.

In the earlier Chicago skyscrapers the steel skeletons were generally filled in with brick or terra-cotta walls, and carried little ornament. The New York architects tried to give them "style" by piling up the "orders" of architecture and introducing many horizontal bands to try and reduce the effect of height. Some monstrous apparitions, with great overhanging cornices, were the result. Horrid blank brick walls on the backs and sides towered in the air, with little prospect of their being concealed by adjoining structures. The Chicago architects did not fall into this error. They had no money to waste on these elaborate fronts, so they began to study the proper effects. Instead of using strong horizontal lines, except at the top and bottom, they accepted the situation and made the vertical lines more prominent. The first two, three or four stories were treated as a design to be seen from the street only. These, clubbed together, formed a strong base from which the vertical lines of the piers covering the steel uprights started. Then the topmost stories, using generally one less than at the ground for the purpose, were joined together in a unique design. This upper part was given more elaboration than the lower section, and was without a massive cornice, often without any projecting cornice. The treatment was usually called "the base, shaft and capital style," and was accepted all over the country as the best type of design for high buildings yet discovered. The Chicago buildings were also free from any attempt to use the "orders," so-called. But Eastern architects sometimes conceived the idea of using the whole upper section of several stories as a complete architectural order. This gave the effect of a classical building hoisted up into the air on long stilts. Then a few Chicago architects who look to the East for ex-

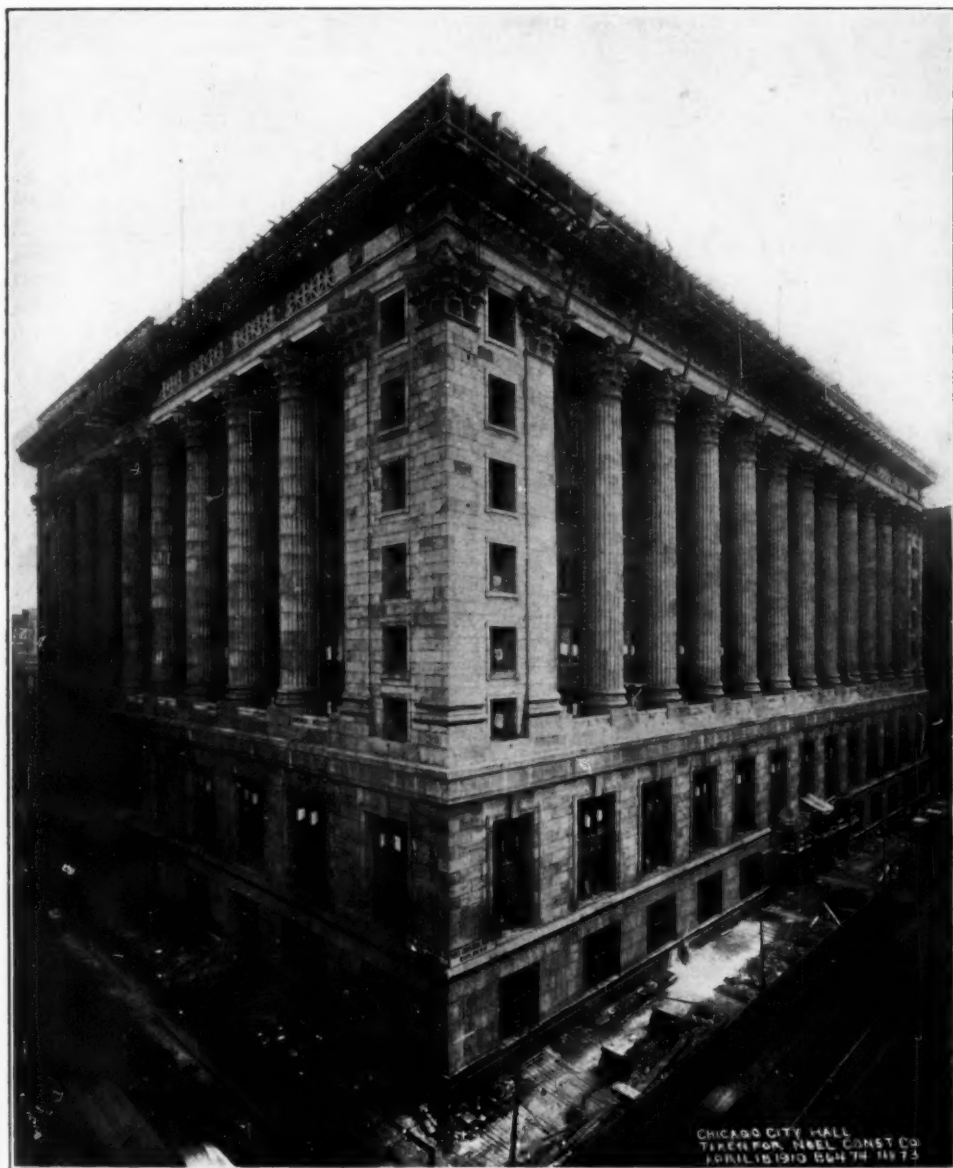
amples brought this fashion back to Chicago, with the result that several Chicago buildings are thus disfigured.

Another method of treating the exterior design of such buildings has attracted little or no attention from writers who have endeavored to discuss before the public this evolution in design for high buildings. One firm of Chicago architects took advantage of the fact that the vertical steel supports of the exterior are spaced the same as those for the interior to omit intermediate piers in the exterior walls and thus reduce the number of windows. This made the windows much wider than their height. The result was that the windows furnished dark horizontal *masses*, taking the place of narrow horizontal *lines*. The effect was remarkable, whether the windows were placed in a smooth wall or between emphasized piers. Of this, the Marquette Building is the best example of the first method, and the Champlain Building of the second, both designed by the same architects—Holabird & Roche. Another example of this effect is in the store of Carson, Pirie, Scott & Company by Sullivan. Yet, notwithstanding the fine effect of these buildings, Chicago has recently erected skyscrapers with windows so multitudinous as to make them resemble dovecotes rather than buildings.

In an article that recently appeared in "Notes and Comments" in this magazine, entitled "The Crown of the Skyscrapers" (May, page 431), the subject of cornices for such buildings was ably discussed. Chicago has all of the kinds referred to and some of the style therein commended. Every fair-minded person, after reading it, must come to the conclusion that no high building ever needs a projecting cornice to shed water free from the walls of the building, and that every narrow street is practically darkened still more by heavy cornices; furthermore, that a projecting cornice on a high building not only darkens the street, but its soffit only can be seen from the street level, and if this cornice is not at the top it cuts off the view of the uppermost stories from the street, and the street from the windows of these stories.

Hence, it has no *use*. If of no use, how can it have *beauty*? What every street and every building needs is a *skyline*, and the skyscraper, of all buildings, demands and is entitled to a skyline. At-

tention has already been called in these papers to the value and beauty of the skylines of some of D. H. Perkins' "School Houses" (Architectural Record for June), and in all of these cases they



CHICAGO CITY HALL
TIERCE & CO. ARCHT. CONST. CO.
JAN. 15 1910 564 74 119 73

Chicago, Ill.

THE NEW CITY HALL.

Holabird & Roche, Architects.

The darker part on the left is part of the Cook County Court House. The addition of the City Hall completes the original design covering an entire city block. The dimensions are 374 ft. on La Salle and Clark Streets, and 314 ft. on Randolph and Washington Streets. The height above street grade is 218 ft.

have been gained by simple means. A law forbidding projecting cornices could be sustained on constitutional grounds.

The skyscrapers illustrated herewith are the latest creations of Chicago architects, some of them just approaching completion, and all erected within the last year. They are not selected with any motive of appreciation, but as historical records of the present-day condition of the art. They show plainly that there has been little or no progression in the development of design applied to commercial high buildings, or buildings for any purpose in the design of which the architect has had occasion to grapple with this serious problem, which is always before us. They seem to suggest that the lessons that have been learned in the Schiller, the Marquette, the Champlain and the McClurg, Mandel and the Carson-Pirie, Scott stores are forgotten. As a whole, they are mainly imitations of the work of Eastern architects.

The new City Hall is nearly completed. Some ingenious practicable schemes have been carried out in it, but it does not add anything to the original part erected for the county government, except by its overpowering massiveness. It now even more effectively overpowers and dwarfs all the surrounding buildings, and does not encourage owners of adjoining private property to attempt to compete with it. The new Sherman House, which fronts upon the Court House square (no longer an open square in any sense of the word), and by the same architects, is now about half way up. It will be possible to observe the effect of difference of scale very soon. The main purpose of the design of the city and county buildings has often been expressed in public. It was to erect an eleven-story building, with stories much higher than those recently provided in office buildings and much less in height than those previously and erroneously incorporated in public buildings, so that it would not look like a skyscraper. This has been done by doubling the scale of the exterior mask, and thereby minimizing the fenestration. But this has been done with inconsistency, because the second and third story windows only are clubbed to-

gether, and those over them at the corners are made the natural size, which makes them look like embrasures in the bastions of a fortress. This and other inconsistencies mark the failure of the attempt to solve a high-building problem by attempting to conceal its height behind an exaggerated mask. The view given shows the new part facing on La Salle Street.

Only half a block from the City Hall is the new La Salle Hotel, by the same architects. It is far superior to the City Hall, but so different that no comparison is possible. It is the first building of the kind in which the prevailing "fashion" in hotel building in the Eastern cities has had its introduction at Chicago. Heretofore the Great Northern, the Auditorium and the Congress have been distinctively Chicago buildings, independent in plan, construction and design, adapted to the business requirements of the Middle West and eminently convenient, comfortable and profitable. But in the La Salle, the Blackstone and the Sherman, now in course of construction, we see the encroachment of those ideas in hotel building and architecture, recently prevalent in New York, as exemplified by the Knickerbocker and a few others. This is the tendency to luxury and high life, which, however, does not concern the masses and is of interest mainly to those who are able to pay for it, as well as those others who cannot afford it, but whose aim in life is to ape the habits of the very rich. They are in the domain of fashion, which has no legitimate part in architectural evolution.

The Blackstone Hotel is far superior to the others mentioned, as it is an attempt to localize and introduce some originality in a conventional style. It is no wonder, therefore, that it has been awarded the gold medal of the Illinois Chapter as the most successful architectural undertaking of the last year in the State of Illinois by Illinois architects. As this will be the subject of another article in this magazine, it is entitled here to only the briefest mention.

It has been a subject of regret among Illinois architects that no representation



Chicago, Ill.

THE LA SALLE HOTEL.

Holabird & Roche, Architects.

of the new University Club House appeared in the last exhibition of the Architectural Club; otherwise it would have been a close, if not successful, competitor for the medal. But it is a condition of the award that the only buildings eligible are those which are in some way exhibited.

The Blackstone Hotel, on the corner of Peck Court, the McCormick Building, on the corner of Van Buren Street, the People's Gaslight Building, on the corner of Adams Street, and the University Club, on the corner of Monroe Street, all being on northwest corners and facing on Grant Park, may be seen in per-



Michigan Boulevard, Chicago, Ill.

HOTEL BLACKSTONE.

Marshall & Fox, Architects.

spective from one point in the park. They demonstrate that Michigan Boulevard has been the most improved of all the streets of Chicago during the past year. The roadway has been widened, and the sidewalks on the west side of the street are now thirty feet in width. The new McCormick Building at the

Van Buren Street corner, opposite the Chicago Club, is a building for renting purposes, and the whole upper part is devoted to offices. Its architecture is not calculated to attract remark. If there is beauty in simplicity, here it is. But there certainly is very little design. The whole building, with its multitude



THE MCCORMICK OFFICE BUILDING

Michigan Boulevard, Chicago, Ill.

Holabird & Roche, Architects.

of apparently little windows, reminds one of the Corn Exchange Bank and Office Building erected two years ago. The three lower stories are faced with granite, and all the walls above are of a dull-colored Roman pressed brick.

Continuing northward from this point past a few small and ancient buildings, once considered as prominent ones, and the most ancient of all for Chicago, the Stratford Hotel, which now looks very odd among its tall neighbors, and across Jackson Boulevard past the huge Railway Exchange and the diminutive-looking Thomas Orchestra Hall, we come to the Pullman office building, now twenty-five years old, on the corner of Adams Street. On the opposite corner from the Pullman is the Peoples Gaslight Company's office building, only one-half of which is completed and occupied. This is the largest building erected during the past year, except the City Hall. The new Gas Building and the old Pullman Building have the Art Institute for nearest neighbors, the center of which is opposite Adams Street. The Institute, as is well known, is located in Grant Park, where it superseded the Exposition Building of ante-World's Fair days, by the grace of Montgomery Ward, the "watchdog of the lake front," and the City Council of Chicago.

Until the Gas Building is completed, we will not be able to judge of its full effect except by the details of the north half. The part now under construction is, however, a duplicate of that which is finished, and when it is completed it will be impossible to secure a photograph of the whole building from any near point of view on account of the interference of the Art Institute. The illustration given is from a photograph taken from the new terrace lately erected around the Art Institute, on the south side of which will be erected Lorado Taft's Fountain of the Great Lakes. Adjoining the Gas Building, on the north, is seen the Municipal Court Building, and next to it the new Illinois Athletic Club. Then across Monroe Street is the corner of the University Club, and beyond it the Chicago Athletic Club. In the distance looms up the Montgomery

Ward Tower, from which the "watchdog" can scan the whole lake front when his duty impels him to do so.

When completed, the Adams Street corner of the Gas Building will be a repetition on both streets of the most distant bay shown in the illustration. The whole Adams Street front will be a repetition of the Michigan Boulevard front. There will be ten granite columns on Michigan Boulevard and eight on the Adams Street front. These columns are of polished granite, forty-six inches in diameter, and their shafts are twenty-six feet high, rising through two stories. They are monolithic polished granite, without entasis, and have Ionic capitals and bases. They do not carry either of the front walls of the buildings, but are set up for purely decorative purposes under the walls, after the polished granite third story and all the terra cotta facing above that story has been set. The entire front walls, except about twenty feet at each corner, are supported on steel cantilevers, occupying the height of the third story, connected with the interior steel frame and resting on a row of steel stansions a few feet back of the lines of the exterior walls, which take the weight of the front walls above the second story. To accomplish this the steel uprights and horizontals of the third-story front, which support the granite facing of the story, are hung from the cantilevers at the line of the fourth-story floor. As this suspended steelwork was partly in place before the photograph was taken, the cantilevers, with their bracketing, are concealed from view. The granite shafts of the first and second story weigh $26 \frac{6}{10}$ tons each. They have a cross-section of 12.04 feet, which, multiplied by 750, which is the average resistance of granite to crushing per square foot in tons, according to Trautwine, shows that their ultimate resistance to crushing is 9,030 tons. With a factor of safety of six, each one should be able to carry safely a weight of 1,505 tons. I do not know whether or not this is the weight of the superstructure over each column, but in the Pullman Building, across the way, a large part of the Adams Street

front is carried on polished granite columns which are two feet and four inches in diameter, and by the same rule have an ultimate strength of 3,207 tons and a safe carrying strength of 534 tons each.

the expensive cantilevers. There is only one danger in fireproof buildings to be apprehended from the use of granite, and that is *fire* from a contiguous building. But this building fronts on a park, and



OFFICE BUILDING OF THE PEOPLE'S GASLIGHT AND COKE CO.

Michigan Boulevard, Chicago, Ill.

D. H. Burnham & Co., Architects.

The walls are of solid brick, and the building is nine to ten stories high. This sets one wondering if these columns under the Gas Building could have carried the wall above them without the use of

the fireproof Art Institute is too far away to do any damage, even if it ever could be burned.

Above the third story the exterior is faced with speckled terra cotta, which



Steger Office Building.
Wabash Avenue, Chicago, Ill.
Marshall & Fox, Architects.

is a very good match to the granite used below. In the seventeenth, eighteenth and nineteenth stories the steel stansions of the exterior walls are faced with terra cotta, finished as engaged columns. They are three stories high, while those at the ground level are two stories high. In the twentieth story the plain ashlar wall appears again, being coincident with the ashlar facing of the corner bays; then the terra cotta cornice for the whole building occupies the twenty-first story, and is finished with a serrated cresting. All of this terra cotta is a close match in appearance to the granite.

The effect of the fenestration is shown on the illustration, and from the point of view taken it is not easy to understand that these narrow openings in a low-storied building are windows. But they *are* windows, coupled together with a small terra cotta pier between.

The apparent uselessness of wasting effort and money in attempting to give architectural effect to skyscrapers in certain localities has been illustrated in the attempt to get a photograph of the new Steger Building, on the northwest corner of Jackson Boulevard and Wabash avenue, to illustrate this article. If a building cannot be photographed as a whole, it follows that it cannot be seen as a whole. The Steger Building can hardly be said to front on Wabash Avenue. It fronts on the Elevated Railroad structure, which carries the trains of four railroads. The only point of view from which most of it can be seen is the window of any car going north on the west track, about three hundred feet away. The photographer was left to his own devices. He secured a lodgment for his camera on the fire-escape of a building on the opposite side of Wabash Avenue. Then he took two negatives with his widest angled lens and tried to match the prints. But he failed. One of them only is here given, with his apologies. This proves that the owners and architects were justified in producing such a plain and unpretending structure. They have given to the passerby some very refined and appropriate shop fronts and a cornice effect that is interesting when seen from the upper windows of buildings a block distant, and that is all. But they have used in every part of the exterior nothing but enameled terra cotta, and have bid for cleanliness, if nothing else.

The Steger Building is used as a piano salesroom and for offices.

THE EVOLUTION OF ARCHITECTURAL ORNAMENT

V.

Ornament with a Foliage Basis. The Gothic School of the European Continent

G. A. T. MIDDLETON. A. R. I. B. A.

The Romanesque and Gothic foliage ornament upon the continent of Europe, while it synchronised with that of Great Britain, differed from it materially in inspiration and in local characteristics, while if we except Italy and Spain where Gothic art was an exotic, we find that there was no marked difference of type or motive once the English Channel was crossed. It may be said at once, however, that the rule already laid down that the 13th century foliage was that of spring, while that of the 14th century represented summer, and that of the 15th century, autumn, was observed and was carried even further in some respects than in England. The entirely different spirit with which this sequence was adopted, and the universal acceptance of the same spirit in continental examples of similar date, seem to have been due to the general condition of the people. This is as might be expected. England, isolated by the sea, was at peace within itself for several centuries, and free to develop village communities and an agricultural population, living in isolated cottages or small villages clustered round a country church and with no attempt at fortification. The life was free and pastoral. The churches were served mainly by secular priests, while those priests who were attached to the monastic orders also lived quiet and peaceful lives, having their houses either in the great towns, where their abbeys formed the future cathedrals, or else completely isolated in the country. On the continent of Europe the conditions were very different; there was constant warfare, constant raiding; the unprotected village was a practical impossibility; the populace was compelled

to live in walled towns. Warfare was the rule rather than peace, and the great cathedrals rose within walled cities, as the churches belonging to a community and served by secular priests, and were not growths of a monastic system. These remarks apply more particularly to the early periods, but they are sufficient to show that there was good reason why English carvers should find their inspiration more directly in natural foliage than the carvers of France and Germany.

During the Romanesque period there were two traditional influences at work in Europe, and, from what has been already said, it will be recognized that these were likely to be strongly felt. Throughout the districts which had been under Roman sway at a much earlier date—that is, along the trade route passing northwards up the Valley of the Rhine into Germany and again along the similar route which passed from Italy westwards across the Riviera and then northwards into France—there is a great deal of Romanesque carving which is closely allied to the Roman and Byzantine. Two examples are given, each from the extremity of one or other of these routes. Fig. 103 shows an almost pure Corinthian capital from the Martin Kirche at Brunswick, which is about as far as the influence of the Rhenish trade route extended. It will be noticed that there are two rows of acanthus leaves, but that the volutes terminate with trefoil leaves and that the rectangular outline of the stone from which the capital has been cut can be clearly traced in the upper portion of it. This may be remarked as by no means an isolated example, but as typical of a large amount of work, such as is to be found over a



Fig. 103. Martin Kirche, Brunswick.

territory of considerable length but narrow in width, extending almost to the Baltic in a directly north line from the Alps. It has already been referred to in the second chapter of this series, one of its most western examples being illustrated in Fig. 48, which showed two capitals in the wall arcade of the north transept of Laon Cathedral—one of which does not differ very greatly from the present example, while the other displays a similar arrangement of the leaves without serrations and with the tips curled over into a tight knot.

Fig. 104 is an illustration of the same true Romanesque influence as found at the extremity of the French trade route, in the Church of St. Sauveur, at Dinan

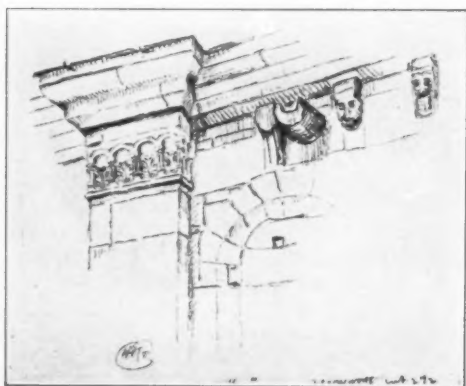


Fig. 104. Romanesque Cornice, C. 1000 A. D., St. Sauveur, Dinan.

in Brittany. The acanthus leaves are here as perfectly of Roman type as they are at Brunswick, but the district was reached by a different route.

While this Romanesque type of ornament was in general use along the two trade routes mentioned and in the districts controlled thereby, there was quite a different influence at work along the coast—that of the Scandinavian pirates who, as Anglo-Saxons, had made England their principal home, but also occupied a great part of the northwestern



Fig. 105. Holy-Water Stoup, Notre Dame, Chalons-sur-Marne.

coast line of France. The ornament due to this influence was most of it devised upon a lineal basis and will consequently be dealt with later on, but there was a good deal in England and along the coast of France into which foliage was introduced, the influence of the type occasionally crossing that of the Romanesque. It is generally known as Norman, and an example is given in Fig. 105, now forming a holy water stoup in the Church of Notre Dame at Chalons-sur-Marne. The stems are in-

tertwined and the foliage is of a branching trefoil character, though intermingled with leaf terminals which show that the Anthemion motive was recognized by the workers. There is a combination of types consequently in this example, such as is by no means uncommon, and it will be recognized that all types were now, at the end of the 12th century, tending towards a foliage treatment.

The next development can be clearly seen in the several capitals of the double north aisle of St. Hilaire, Poitiers, illustrated in Fig. 106. Some of these capitals are almost purely Corinthian, but the nearest and the largest in the photograph show fewer leaves upon the bell, and these are curled over at the tip, still to a certain extent suggesting the volute of the Corinthian capital. What is being reached is something very like the broad leaf capitals of the Oratory Chapel in Dover Castle already illustrated in Fig. 83, which, as said in connection therewith, was really French rather than English, the development being as now indicated. In France, on the other hand, the Scandinavian type, as illustrated in Fig. 105, was never developed.

The influence of the Romanesque is still seen, however, in many examples, and appears in divers manners. The broad leaf, for instance, is found in two tiers in the angle capital from the Porch in the Templar's Church, Laon, illus-



Fig. 106. The Double North Aisle. St. Hilaire, Poitiers.

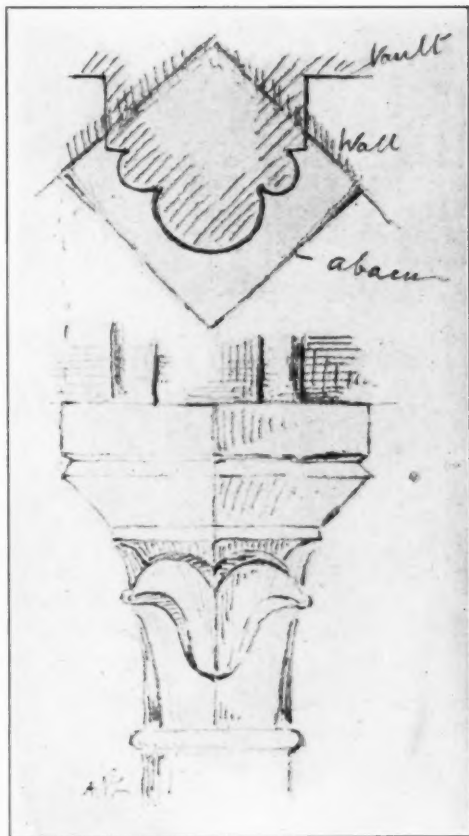


Fig. 107. Angle Capital and Vault Rib of Porch to the Templar's Church.

trated in Fig. 107, in which a good deal of other carving is almost identical with that found in the well-known Norman church at Barfreston in Kent; the similarity being so marked that it is even possible that the same mason was employed,—the distance between the two places not being really great, the intervening sea being no great obstacle if it be remembered that at the time now being discussed England was in very close touch politically with the continent. Again in Fig. 108 there is an illustration of a type quite frequently met with, where there are as many rows of leaves as in a normal Corinthian capital. Each leaf curls over at the point and is without serrations. This occurs as far west as Lisieux in Normandy, in a church

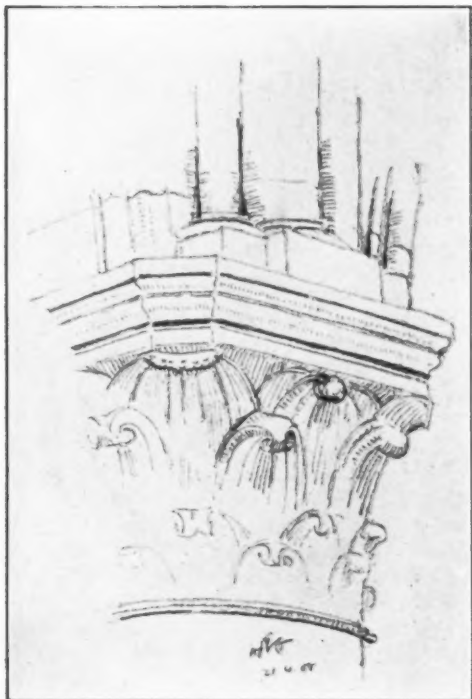


Fig. 108. Cap in Choir Arcade.
Lisieux Cathedral.

which has pointed arches and is of a generally 13th century form; it is in fact the typical early 13th century capital of France, the leaf being that of the hart's tongue fern which has not yet opened, belonging to a period when the arches were pointed, when tracery was used, and when, in contradistinction to English work, the columns were generally single cylindrical shafts and the mouldings were of a Romanesque type, consisting of little else than large rolls at the angles of the various rectangular blocks of which the arches were built up. It will be noticed how very different this work is from the English capitals illustrated in the last chapter, and that even at Lisieux where English influence was considerably felt.

When the advance took place and the foliage became more natural towards the latter part of the 13th century, it was developed out of the broad leaf in the way indicated in Fig. 109, which is an entirely typical capital from Soissons

Cathedral. It is as perfectly indicative of French work of its date as the capital from Westminster Abbey already illustrated in Fig. 86, is of the English. There are no slender stalks with clusters of leaves and these leaves intertwining, but instead there are broad leaves rising from the necking and just opening at the points. It is spring foliage, but with a difference; it represents the broad fern leaf opening out; it is best known as the "crocket" cap; and the leaf hooks, or crockets, are arranged in regular ranges. Leaves of a similar character are only found in England in rare examples, though a complete series can be recognized in the wall arcade round Westminster Abbey, when about one in every three is of this description, suggesting the idea that there was one French mason amongst the Englishmen engaged upon the work.

Even here, upon the coast of France, English influence might be expected to

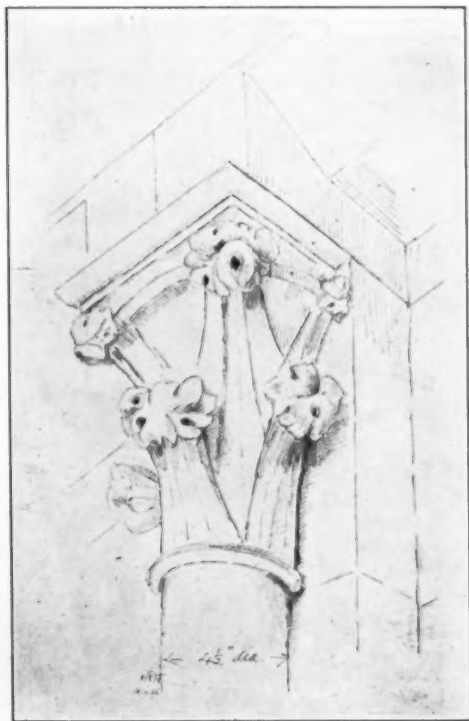


Fig. 109. Typical Capital, Soissons Cathedral.

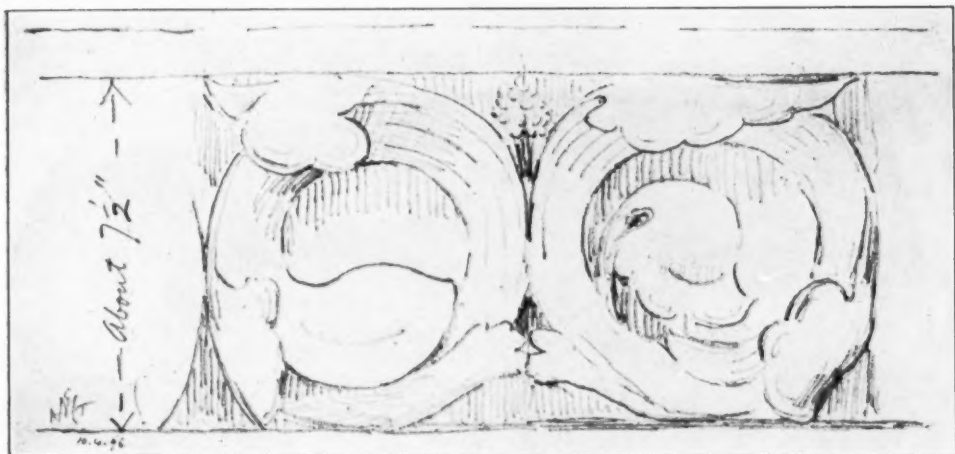


FIG. 111. STRING ROUND APSIDAL TRANSEPT UNDER GALLERY, SOISSONS CATHEDRAL.

be felt, and where the trefoil leaf was more developed we find, as in the capital in the Knights' Hall at Mont St. Michel shown in Fig. 110, that the arrangement was formal in character. Examples such as these, however, are of considerable rarity, and so too are scrolls such as that shown in Fig. 111. from Soissons, though where these occur they are always of considerable size and boldly executed, reminiscent in their curves of the scroll work of Roman times rather than of the freedom of the Gothic—and tightly curled in the leafage. Where these long scrolls occur, set in hollow mouldings, they always have an extremely rich effect, their simplicity and power being perhaps better suited to their position than the delicate English work would be, for they are almost always placed at some distance from the eye. Examples of such scrolls as they occur upon a flat surface are illustrated in Fig. 112, which shows the jambs of the north door of the west front of Rouen Cathedral, the Romanlike scroll on the left being developed into the purely Gothic one upon the right, with its leaves carried across the tendrils so as to bind them together. This doorway is a fine example of French carving of its date, with half Romanesque, half crocket capitals, and some very wonderful pierced foliage in the outer and the third of the arch rings—retaining the rectangular

outline of the stone, and yet so cut as to be almost detached from its substance.

During the early years of the 14th century there was not much building work accomplished in France owing to political causes; for the country was overrun again and again by the English, and building never flourishes during times of war. Only in the northeast



Fig. 110. Portion of Leaf Capital. Knights' Hall, Mont St. Michel.



Fig. 112. North Door, West Front.
Rouen Cathedral.

was there comparative peace, and it is only there where architectural development took place. Examples of foliage carving of this date are consequently so rare that it is difficult to lay down any rule, and it would be impossible to do so if we had not the English work for guidance. In the interior of the west front of Reims Cathedral, however, and also in the western-most capitals of the same building, foliage carving is to be found which is of almost the same date as that in the chapter house of Southwell Minster referred to in the last chapter, as can be well seen in Fig. 113. The undercutting is not so deep as in the English work, but the foliage is of precisely the same natural character, though here it is confined within rectangular panels. It will even be noticed that the same leaves are represented as at Southwell; it is almost as if one of the English carvers who had been engaged there had subsequently found his way to Reims.

Fig. 114 represents a capital from the Church of St. Alpin, at Chalons-sur-

Marne, which is of a slightly later date, more like the English work of about the year 1330. The whole bell of the capital is covered with large vine leaves, amongst which the grapes appear though the stem is hidden. It is late summer foliage, just such as we should find in England at this time, perfectly natural in form.

From this date for some thirty or forty years it is impossible to trace any further development, the period corresponds with that of some of the most destructive warfare ever known upon the European continent, to be followed by the "Black Death" in 1349. We have already seen that the effect of this was very serious in England, but it was even more so in France. On the revival of the country and the recommencement of building work, however, the effect of war is seen in a new way. Recent writers upon the subject trace the rise of the French "flamboyant" phase of Gothic architecture to the fact that a considerable number of Englishmen must have been left behind in France as prisoners



Fig. 113. Wall Carving, Interior of West Front.
Reims Cathedral.

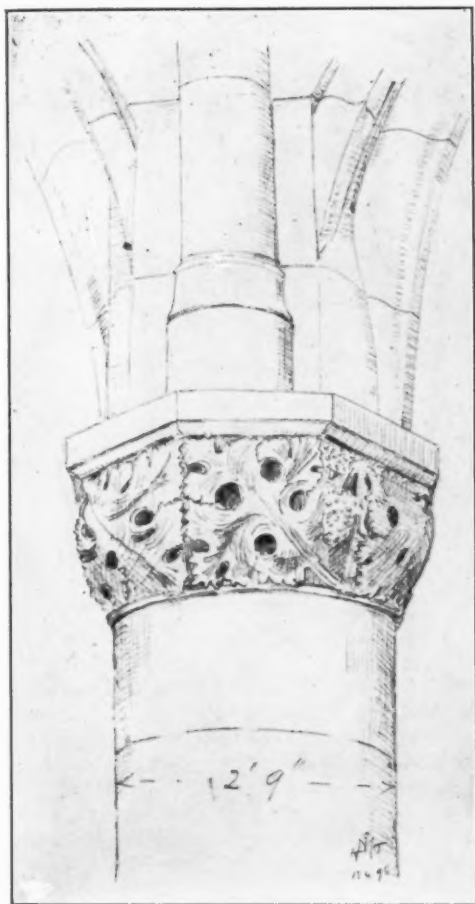


Fig. 114. Capital in Apse.
St. Alpin, Chalons-sur-Marne.

of war or invalids. Their influence is seen most markedly upon the tracery and the mouldings, but surely it is to be recognized also in such foliage as the thistle carving on the west front of Tours Cathedral, a small fragment of which is illustrated in Fig. 115. Here we have all the freshness of the English 14th century carving, with its crisp outline and deep undercutting, combined with the general inclination to use autumnal foliage which was becoming universal in the 15th century. The stalk is still fairly covered with the leaves, but it can be perfectly well traced, and it is also old and gnarled. Even the thistledown also appears, as a sure indication of late

work. There is, in fact, a large amount of carving of this description to be found, not in one district only but spread over the greater part of France, particularly where it had been overrun by the



Fig. 115. Thistle Carving, North Door.
West Front, Tours Cathedral.

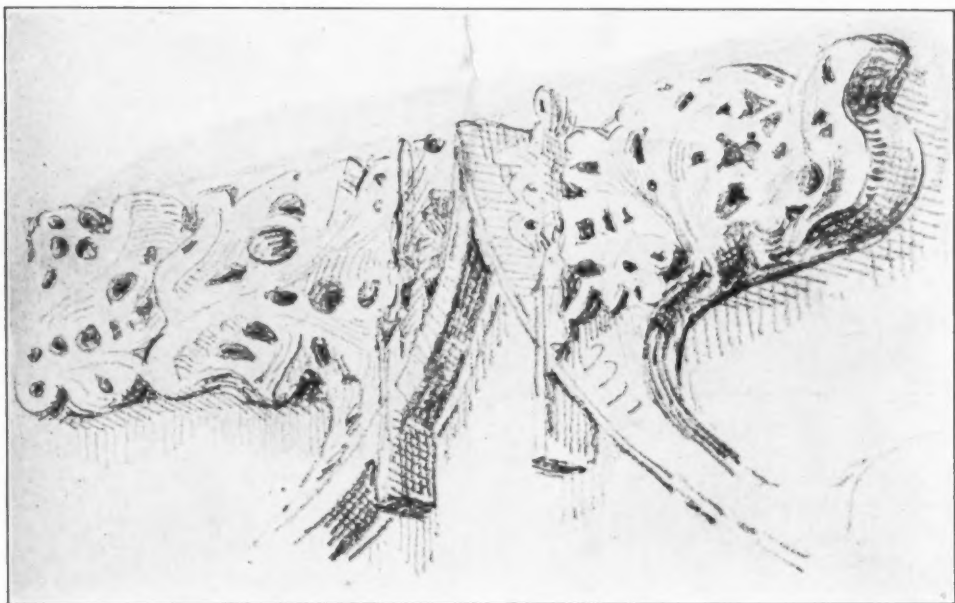
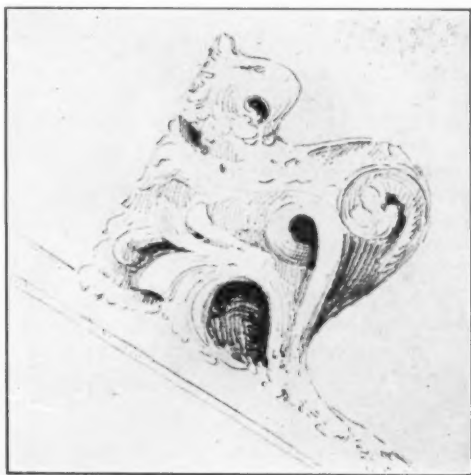


FIG. 116. CANOPY TERMINAL, ST. SAUVEUR, DINAN.

English a generation previously; that is, from the north of the Seine, right through the whole district of the Loire and into Poitou and Anjou. It was, of course, controlled more or less by the available material. The example shown in Fig. 116, perhaps a trifle later in date than the last, was executed in granite

and consequently shows a type of workmanship in which effect was obtained without high finish, and to a large extent by drilling deep holes down from the surface, while another somewhat later example, shown in Fig. 117, but carried out in a hard limestone, again displays crispness of outline with the finish car-

Fig. 118. Wood Crest.
Maison François I., Abbeville.Fig. 119. Crocket over West Doorway.
Antwerp Cathedral.

ried to as great perfection as such a material would permit. In this case the leaves are quite detached and of the latest autumnal character, not so much conventionalized as ragged, like the detached fallen leaves of late autumn time. This example occurs in the courtyard of the Hotel de Ville at Abbeville. Another small example from the

a good deal of the work which was carried out in the low countries at that date, but with a somewhat English outline as compared with what was generally found in France at the same time.

As the 15th century drew towards its close, and at the opening of the 16th century, the carved foliage of France went a step further than in England—

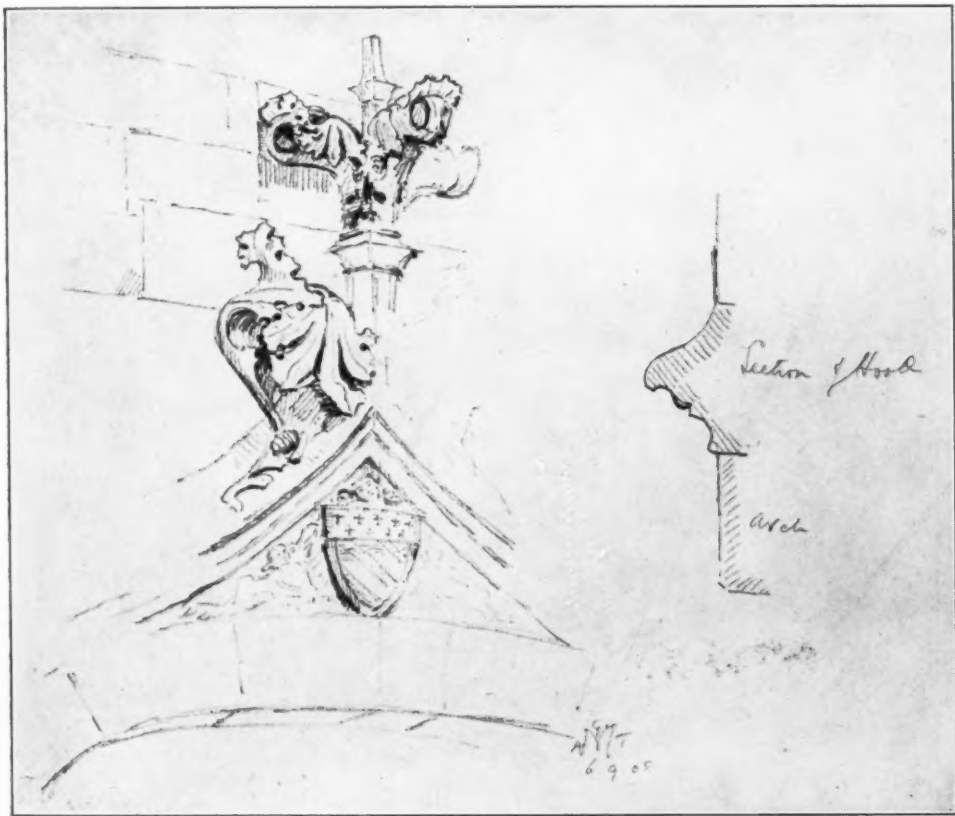


FIG. 117. CROCKET AND FINIAL TO ARCHWAY IN THE COURTYARD OF THE HOTEL DE VILLE, ABBEVILLE.

same town is illustrated in Fig. 118, but this time the material employed is wood. It may be somewhat interesting to compare this illustration with Fig. 99, which was just as typical an example of English woodwork of a simple kind. Another somewhat fine example of practically the same date is the crocket over the west door at Antwerp Cathedral shown in Fig. 119; it is typical of

except in such isolated examples as the choir stalls in Henry VIIIth Chapel, Westminster, already described. The late dying leaf of winter rather than of autumn, such as is illustrated in Fig. 120, appeared quite frequently, and even the bare bough of winter, shown in Fig. 121—a sketch of niche canopy in the south doorway of Beauvais Cathedral—was not entirely uncommon.



Fig. 120. Crocket to Canopy over North Doorway, Beauvais Cathedral.

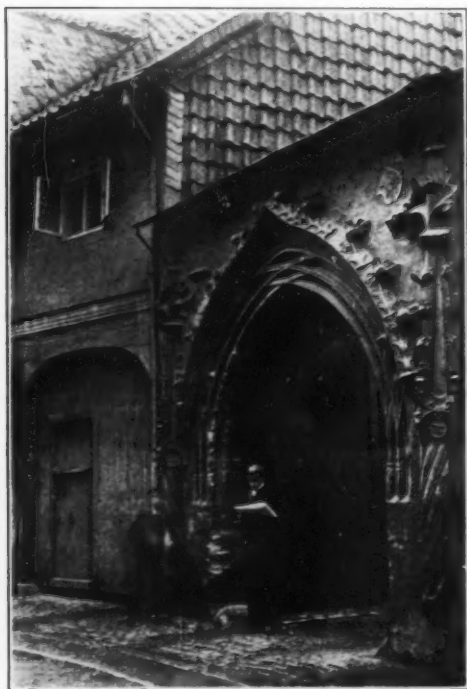


Fig. 122. A Doorway at Goslar, North Germany.

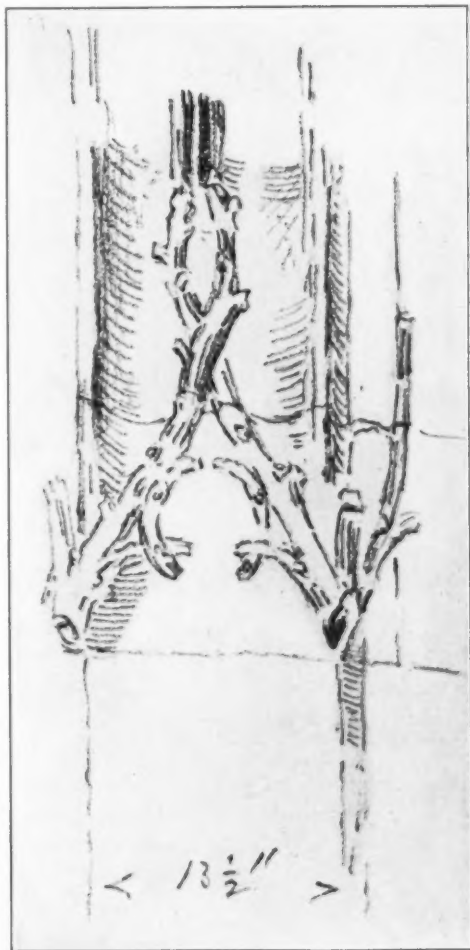


Fig. 121. Niche Canopy in Buttress, South Doorway, Beauvais Cathedral.

It was not until the comparatively late period of the 15th and 16th centuries that there was much Gothic carving in Germany; it seems as if there is an almost unbridged gap from the 12th to the 15th century. Of the later work, however, a considerable amount exists; it is based upon the French, but as a rule is more heavy and less crisp and instinct with a less artistic spirit. The doorway at Goslar, shown in Fig. 122, is typical. The leaves are detached and are of winter rather than autumnal type, but unquestionably ugly; in fact, they are overpowering in relation to the door,



FIG. 123. CHOIR STALLS, ULM CATHEDRAL.
(From a Cast in the Victoria and Albert Museum.)

not kept in proper subordination as they should be to the general architectural treatment, with little sense of proportion between one group of leaves and another, the excessive prominence given to the pinnacles of the terminals being particularly noticeable in comparison with the crockets upon their edges. This heavy type looked perhaps better in woodwork than in stone. The choir stalls at Ulm Cathedral, shown in Fig. 123, are typical of a great deal of wood carving of the late 15th century. The stem in the central panel is heavy, and the leaves artistically intertwined around it; but no less characteristic is the long lower panel, with its central rod perfectly straight, out of which the leaves spring—a form of carved foliage ornament which was commonly employed upon the German timber buildings of the time.

When the spirit of autumn was replaced by the spirit of winter—which occurred in the early part of the 16th century in Germany as well as in France—the foliage carving might be said to have “gone to seed.” Fig. 124, though an extreme, must not be considered to be an isolated example of the represen-



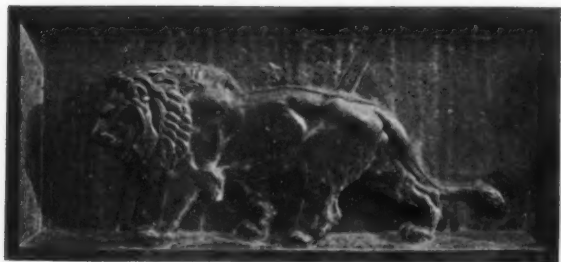
Fig. 124. Tree of Jesse, Worms Cathedral.

tation of bare boughs with occasional dying leaves upon them, exaggerated until all artistic feeling is lost. It is perfectly clear that the carvers have actually twisted together small pieces of wood to serve as their models.

The spirit of the Gothic art was obviously dying out; it was quite time that

it was replaced by something else. The seasons had run their course, spring had merged into summer, summer into autumn, and autumn into winter. The same thing had occurred in Germany as in France and in England. Gothic architecture was at an end.

NOTE.—VI. paper in September issue.



✓ PARIS SCHOOL DAYS

How the Student Lives and Works at the Ecole des Beaux Arts

GEORGE S. CHAPPELL

Much has been written for and against the "Ecole des Beaux Arts" as an influence in American architecture, many have been the discussions which sometime have become wrangles as to whether this influence were precious or pernicious, nor can the question ever be settled, other than by individual standards. But out of the conflict of opinions stand certain salient features which seem to claim by their own right the honest respect of the thinking world. Regardless of the actual product and its quality of good and evil, we must pay the tribute of admiration to the manner in which that project is evolved.

There is one particular phase of this great school which seems to touch the inner spring of success. It is the quality so dear to the true Frenchman's heart, the very name of which he holds in passionate regard. On every public building the triple alliance of "Liberty, Equality and Fraternity" proclaim their sovereignty and truly the greatest of these is liberty, and it is on liberty that the entire educational system of this great world factor rests as on a solid foundation. It is the keynote of the situation, the kernel of the nut, the core of the apple of concord.

To the American student newly arrived, freshly graduated perhaps from a college, or technical school at home, what confusion worse confounded is presented! The routine of class rooms, the stern obligations of a chapel bell, the baleful spying of a dry old dean—these are the things of custom, the harness in which he has learned to work. And now he is suddenly given what he has never had before—Liberty! and of the simon-pure, three-ply, blown-in-the-glass variety. There are lectures to which he goes if he feels like it, problems which he assails if so inclined, examinations—hitherto the nightmare of his

short sweet life—which he can treat with lordly and delightful indifference. When some particularly odious examination comes along, he is at liberty to go bicycling in the Bois or to jump off the Pont Neuf into the Seine if he dares to risk his life in the jaws of the ferocious "dogs of saving." These fierce beasts make a specialty of keeping down the suicidal tendencies of the nation by dragging semi-submerged citizens out of the river in which laudable exercise they are assisted by a separate department of police who receive the graceful title of "plunging agents." At the inception of this attractive form of service an enterprising reporter dropped off one of the bridges as a sort of test case. Tremendous excitement ensued. Two of the dogs, aghast at the situation, howled dismally on the bank nor could they be induced to set foot in the water. The third however, as if to make amends for the timidity of his two companions, who were both ladies, not only hurled himself immediately into the flood but proceeded to perform the rescue work with such enthusiasm that the journalistic martyr was half drowned and half eaten. It was man against brute with the man very much out of his element and fatal results would certainly have ensued had not the brave "plunging agent" gallantly fulfilled his function in the nick of time. Naturally the howls of the dogs found their magnified echo in the press of the nation and Paris hugged itself with glee over the situation.

It is small wonder, then, that our fledgling architect with such spectacles as this to entertain him not infrequently loses temporarily his grasp on values and forsakes the pursuit of learning at the very door of the temple. This of course is most reprehensible but who is there who, in his heart, does not like

occasionally to thumb his nose at the teacher.

But—and here is the underlying wisdom of the scheme—a change comes o'er the spirit of his dreams. Through back alleys and grimy courts some day or other he comes to harbor in the only form of social unit possible, an atelier. It is a fearful hole, usually, and he draws invidious comparisons with the comfortable class rooms of his school days but it is his atelier with a strong spirit of its own and in the long dingy room, over the battered tables and stools, he gradually learns the lesson of voluntary work. For the shaggy haired comrades who crouch like vultures over their drawings are as free as he to roam the city streets, or climb the Eifel Tower and drop bolt heads on human heads below or do any and all of the interesting things in vogue at the time. But they are here working and they work hard and there is strife and emulation prompted only by honorable ambition.

So the foreigner who is greeted and catalogued as "red-skin" and "savage" if he comes from America, a "vile Prussian" if he hails from Germany or Switzerland and a plain pig if his extraction be English, finds himself working too and hustling to lectures and actually looking forward to examinations with a pleasurable excitement. And the day that he is finally admitted to the school, he is the lord of creation. From then on come "projets" in regular succession. To retain his membership in the school it is necessary to "render" or finish only one projet a year. But he does most of them with snatches of recreation between. Two or three days after the completion of each projet comes the "loge" for the next one. The loge is held at the school itself and is distinctly informal in its character. The students from all the ateliers assemble in the big courtyard to await the opening of the doors. It is a picturesque sight, this gathering of the clans, and as man after man throngs through the gateway, loose-trousered, shaggy haired, bearded—except the Americans, who in France still follow the habit which marks one as a curé, cocher or waiter—each

armed with a T-square and board, and carrying a sack of other necessities in a brown canvas bag slung over his shoulders, they are distinctly like uncouth warriors of an earlier age, gathering for battle. And there is a spirit of battle in the air for the rivalry between ateliers is strong though friendly and vents itself on these occasions in strident cries of greeting, exhortation or derision. Each well-known figure is the signal for a burst of epithets complimentary or otherwise as he promptly joins his comrades and adds his voice to the din. The gray court-yard with its flanking walls of solid masonry is an ideal cavern for the creation of noise and the opportunity is not missed. At exactly nine o'clock the doors are opened and in a wild rushing charge the cohorts sweep up the narrow stairs and spread out over the various floors to their favorite loges which are simply little stalls with room for two men to work in discomfort. After a moment the guardian appears to distribute the programme or printed statement of the new projet and at the first glimpses of the blue uniform outraged liberty stands up on her hind legs and howls defiance. Through a storm of insults, jeers and stinging personalities, salty with wit, the symbol of authority wends his way, impassive and unheeding. "C'est la jeunesse!" he will observe philosophically and escape to his little office. Immediately there are more howls of rage, this time directed at that august imbecile, the Professor of Theory, who has dared to propose this idiotic programme.

"An Institute for the Preparation of a Therapeutic Serum!" bawls a stentorian voice, "one must supply lodgings for ten thousand guinea pigs!"

"Ah! what luck!" screams a neighbor. "For I know how to draw a guinea pig in plan."

Then pictures of guinea pigs have to be drawn for the benighted foreigners who do not recognize the strange word in French and the actual size and requirements of guinea-piggeries are exhaustively discussed.

At last comparative quiet is attained, boards are laid down, paper spread and

the preparation of the "esquisse" or sketch is on. Communication is practically unrestricted. Friends stroll from one loge to another, discuss the "parti," criticise one another's solution and return to their own places, while the sleepy guardian behind his paper buries himself deeper in a thrilling account of how

at this juncture some rapid draughtsman finishes his esquisse, makes a tracing for future reference and with a triumphant cry of "Je rends, Messieurs," hands in the original to the guardian and clatters down the stairs followed by a parting volley of insults. This at once sows seeds of unrest in other hearts and the



"ONE MUST SUPPLY LODGINGS FOR TEN THOUSAND GUINEA PIGS."

Emile Dufour, butcher-boy was odiously crushed by an omnibus on the Boulevard Clichy. The morning ends unofficially about eleven o'clock when knapsacks are unpacked and a luncheon of bread, ham and sweet chocolate is eaten or thrown in small fragments at one's nearest neighbor. Then back to work for those who wish. If you decide suddenly that it is a good day for boat-riding you have only to pack up your things and depart. Usually

general haste of completion spreads through the crowd.

"Charette! Charette!" shouts a long-haired boy digging his pencil nervously into the Whatman, and the cry is taken up from loge to loge and swells to a tremendous chorus. It is the hurry motive of the school, derived from the push-carts in which the completed projects are whirled to the school from the different ateliers.

As the light fades, candle ends are lighted and stuck in heavy iron candle sticks.

The moments are growing precious now and those who are left are toiling

the inmates that they cannot possibly finish in time, another has lighted a bonfire of tracing paper under a friend's stool and is now enjoying the fragrance of burning corduroy, while the third is



"THE MOMENTS ARE GROWING PRECIOUS."

vigorously except perhaps two or three wild-eyed youths who have either finished their sketches or abandoned the task and who now stay to make life as insupportable as possible for their companions. One walks from loge to loge assuring

devoting himself entirely to the consumption of cheap red-wine, the sale of which is the guardian's perquisite. As the closing hour of nine approaches cries of malediction and lament fill the air, appropriately exaggerated to suit the

dramatic situation. It is a strong picture. The soft light of the candles bringing the haggard faces and long locks into high relief, the gigantic distorted shadows writhing on walls decorated with fiendishly clever cartoons and masks, the legacy of generations of painters and architects who have come and gone, the rush of a triumphant figure through the gloom, the ruby gleam of a half-filled wine-glass and the relentless chant which now sounds a mournful note, "Charette! Charette!"

"Mon Dieu! Eight forty-five, and an impossible section!" wails an unfortunate lad with more ambition than experience, and in despair he is about to give up literally at the eleventh hour, when

some older hand interposes with a curt, "Here, give me your brush. Pack your bag and get out!"

And as the fatal hour is reached and the guardian in a stentorian voice which no one would suspect him of having announces clamorously that "one closes," the last esquisse, wet and glistening is rushed to the wicket, the last knot of friends clatters down the stairs and the big court is left dark and empty. The loge is over.

NOTE.—This is the first paper of a series of three devoted to entertaining data about Paris School days. The second article will tell us about "The Atelier" and the general preparation of a projet. The final paper will treat of "The Charette" in detail. Mr. Chappell will contribute a group of pen and ink sketches to illustrate the subjects.



"READING HOW EMILE DUFOUR, BUTCHER-BOY, WAS ODIOUSLY CRUSHED BY AN OMNIBUS."

THE COUNTRY GENTLEMAN'S ART

Specifications for the Working Out of LANDSCAPE GARDENING

GEORGE F. PENTECOST, Jr.

Landscape gardening is pre-eminently the country gentleman's art. In a sense which holds as much truth as imagery, it may be said to be as closely related to the finest of the out-door sports, as it is closely related to the exclusive Fine Arts. And surely the work involved in the actual development of a landscape plan affords not only a health-giving exercise but a pastime of the greatest interest. There are many owners of country estates who look to the work of developing their grounds as an especial source of out-door "sport," in the same sense that others look to horse riding or yachting as healthful pastimes.

The following article is intended to summarize the general procedure in the working out of a landscape plan drawn for a property entirely undeveloped. It is taken for granted that the owner has had a plan drawn by an expert, and hence that the aesthetic side of the problem has been solved. The pleasure of such work is greatly increased if it proceeds economically and is not constantly "held up" by bad management, and when completed is well completed.

The secret of economical work is to so arrange the several distinct "sections" that each can be finished in its entirety without interruption and in due time for the commencement of the following section. In many instances several sections can be initiated simultaneously. The principle above stated, however, holds good whether one or more sections are under operation at the same time. In no case should a section be started unless it can be finished in one operation. To "jump" from one section to another—to partly complete here and to barely start there—to have odds and ends of work in various stages of completion, increases the cost and invariably results

in patchy work. Strict adherence to the principle of concentrated effort along definite lines is the watchword of the successful operator.

By a careful study of the general plan—which should show the alignment of the roads and walks, the drainage and planting systems, the terraces and flower gardens and all other features which may be contemplated—the distribution of the various material and other necessities of the work can be foreseen and duly regulated. By "sectional work" is meant such distinct and consecutive operations as the clearing of the property, the lifting of the top-soil, "cuts and fills" and grading, the laying of the drainage pipes and the building of the roads; the distribution of the top soil for the reception of the plants and flowers and so on. Again, from the working plan should be taken the "quantities"; that is, the amount and kinds of drain pipe called for, the number of cubic yards of gravel or of broken stone, the number and sizes of the catch basins, the quantity of brick and sand and any other material which may be needed and which requires to be ordered from various sources. Nothing so retards the progress and increases the cost of work as the late delivery of material. Hence one of the first matters that should be attended to is the securing of estimates and the placing of orders for material. The order that the various sections of work should follow is in general as I have treated of them in the text. It is not always possible or practicable to follow such an order exactly; individual circumstances must determine the necessary variations.

Before the actual work of the plan is commenced, the area over which it is to be carried on must be cleared of all obstructions. Rubbish that cannot be used

for fill should be carted away. If there is a thick growth of weeds, these should be cut down and burnt. Old roots and stumps should be grubbed up and either burnt or carted off the property, but never used to fill up holes or depressions. Old wells should be filled up if they are not to be used. Gravel from any old roads or paths which may be of use in the construction of new work should be preserved in neatly built piles. And in doing so care must be taken not to place the piles in positions that will interfere with the future work. In short, the decks must be cleared for active work.

The next operation in order is that of preserving the top-soil. Commercially, top-soil is worth anywhere from one dollar to two or more dollars a yard. An abundance of top-soil is of the last importance in the final maturing of the grounds; upon its quality and upon its abundance depends the richness of the lawns, the health of the plants and thrift of the flower beds. And yet of all operations the preservation of top-soil is the one most likely to be neglected. It is an expensive operation, it offers a hindrance to the active work of construction, and in its first handling shows no material results. The consequence is that it is generally neglected or undertaken at a period of the work which makes its preservation so expensive that it is but partially preserved. To bury top-soil or otherwise waste it in landscape work might be justly called the "unpardonable crime." Handled in the most economical manner, and under average conditions, and when taken directly from the point of excavation to the point of fill, it will cost about twenty or thirty cents a cubic yard to move it. When, however, it is necessary to pile the soil at various points for future use, the operation is doubled, and the cost is probably more than doubled. But even at such a cost it is well worth preserving and far cheaper than the cost of purchasing it from foreign sources at a later date.

Top-soil should be moved from all surfaces that are to be altered. Hence the necessity of partially staking out the

work before this operation is commenced, of studying the possibilities of moving it but once, or, if this is impossible, of selecting the most convenient places for storing it. The sizes of the piles of soil and the points of storage must be determined by the nature of the work. Care should be exercised, in excavating the top-soil, to keep it clean by removing, as occasion occurs, all debris such as small stones and twigs. If top-soil is scarce and costly to purchase, it can be manufactured by adding to it a quantity, say a third, of sub-soil and well-rotted manure, leaves and grass mowings, and trenching the whole together. The trenching should be done several times and until it is thoroughly mixed.

The active work of construction follows the removal of the top-soil. But before this is commenced the design should be transferred to the ground as accurately and fully as possible. Where there are terraces to form, or deep filling or cutting, rough grade stakes should be placed as guides, care being taken to replace the rough grades with accurate markings as the final heights or depths are gradually approached. Cuts and fills are generally arranged to equal each other in quantity, and this should be kept in mind when such work is started, in order to minimize the lengths of cartage and to insure adequate "placings" for the given excavations. "Filling" should be spread in layers not exceeding eight inches, and if the soil be very dry it should be watered in order to prevent subsequent shrinkage. In organizing the labor gang it is well to keep the following simple rule in mind: three men are required to properly utilize two wheelbarrows—one to run the barrows and two for filling. An average run should not exceed one hundred feet. For every additional twenty yards an extra man is required. If picking or hacking is required on account of heavy gravel or hard-pan an extra man will be required to assist the diggers. Three or four men thus organized should move about thirty cubic yards a day to a distance of 100 feet. Care should be taken to remove from the last two layers of fill all stones, twigs or other form of debris. If this is

not done the frost will eventually raise the debris to the surface of the lawn. Each layer of fill should not be more than eight inches in depth.

Following the completion of the rough grading, the trenches for the drain pipes should be opened, the pipes laid, and the trenches refilled. This should be accomplished at the earliest possible moment in order to avoid the necessity of breaking through finished surfaces, and to allow time for the trenches to settle. The sub-drainage is always an expensive item in the general bill of costs, and can frequently be reduced by a little forethought in the arrangement of the surface grading. By diffusing the surface water equally over a given area, and thus preventing it from concentrating in dangerous quantities, the need of leading it off by means of a drain pipe is avoided. The sizes of pipes used will depend upon the amount of surface water to be provided for. Three and four-inch vitrified pipe will suffice to carry off the average collection of water from the surface of the roads. If, in addition, there is a large watershed to be provided for, six or even eight-inch pipes will have to be laid. These, of course, would form the sub-mains connecting direct with the main outlet pipe. Exceptionally rough topography only will call for the use of pipes of this size. Where there is but one main outlet, and the water has to be carried long distances, and the accumulation of water is apt to be intense, the sizes of the pipes should gradually be increased as the main outlet is approached. A three-inch pipe will carry the average flow of water for a distance of two hundred feet or even more if the gradient is severe. A fall of one inch in five feet is sufficient for such a drain. Catch-basins are usually the points at which the junction of different size pipes are made. The pipes should be laid to a depth of three feet, or below frost line. They should be laid with great accuracy as to their levels, and held firmly in place by small stones and covered to a depth of one foot with field or cobble stones. As a rule, the lines of the roads and paths form the nucleus of the drainage systems. When following the lines of the road the trenches should be placed at least two

feet away from the edge of the gutter or road. Thus if any accident should occur to the drain pipe, necessitating its removal, it will not be necessary to disturb the gutter or road. The outlet of main drains should be in all cases protected by an iron grating or lead into a blind drain; that is, a drain composed of loose stones and covered over by earth and sod. The distance between catch-basins should be governed by given conditions. On very steep grades the basins should be placed not less than fifty to sixty feet apart. Low places, or "valleys," in the lawns, turn-tables, and at the corners of the house should all be tapped by a basin and connected with the main system. When pipe lines run to within a few feet of a hedge, a plantation of trees, or of single trees and shrubs, the joints should be tightly cemented. If this is not done the roots of the plants will find their way into the joints of the pipes in search of water, and in doing so will either clog the pipes or alter their level.

Few drainage systems can be worked out to perfection even from the most accurate of data obtainable. Hence it is a good practice, after the planned system has been laid out, and during the progress of the work, to inspect the grounds after every heavy rain storm, in order to ascertain what points have not been sufficiently provided for. All such points should be located while the water is standing, and at later dates should be provided for either by sub-drainage or by efficient surface grading. It is a good idea to try out all drains and catch basins before the earth has been replaced in order to test the accuracy of the levels and the general working ability of the system. A word of caution should be added as to the imperative need of keeping the catch-basins free from collected silt or other forms of rubbish. The life of the drainage system depends upon the thoroughness with which this is done.

The drainage of low and flat or marshy land is frequently demanded in the development of estates. The most satisfactory results will be obtained by the use of the common round agricultural tile. The most suitable size for average conditions is the round tile

twelve inches in length and three inches in diameter. These small tile form the so-called "laterals" of the system. They are connected with the main output drain by tightly cemented Y joints. Six inch, or even four inch, sewer pipe, with collars, cemented together form the main outlet drain. Trenches three feet broad at the top, and twelve inches wide at the bottom should be opened along the lines of drainage. Care should be taken in digging the trenches not to exceed in depth the final level of the trench at any point. If this be done, a soft spot is created which will eventually allow the pipe at that point to sink below the required level, and thus destroy the drain. The trenches should in no case be less than three feet in depth. The tile should be placed in the bottom of the trench with the greatest of care as to level and packed tightly in place by placing small stones along the under edges of the pipes. The tile are placed about one inch or less apart and "joined" together by loose collars formed from pieces of larger sized pipes. This provides an ample opening for the water and at the same time prevents the entrance into the pipes of sand and silt. The tile when thus laid should be covered by tightly packed cobble or field stones to a height not exceeding one foot to the finished level of the trench. The remainder of the trench should be filled by soil to the natural level.

The laterals should enter the main drain at an acute angle; that is, obliquely to the flow of water in the output pipe. The outlet of the main drain should either be protected by an iron grating or covered by leading it into a blind stone drain. The channel into which the drain pipe discharges should be kept free from all obstructions, and sufficiently low to prevent water flowing from it back into the outlet pipe. As the fall or "heading" of this class of drain is always slight the greatest care must be taken to secure accurate grades. One pipe out of level will destroy the entire line of drain to which it is attached. An ordinary field of a low and swampy nature will be thoroughly drained if the laterals are placed at thirty or even forty feet intervals. If, however, this proves insufficient, intermediate lines may be added as seems best af-

ter a sufficient trial. In many instances it is not necessary to place the laterals at regular intervals. In rough and irregular fields certain portions only need draining and in such cases the drains can be laid accordingly. This is known as the "natural system" of drainage.

Where the laterals pass within ten to twelve feet of low growing shrubbery, or within twenty to thirty feet of large growing trees, the land tile should be replaced by sewer pipe tightly cemented. This will prevent the roots of the trees from entering the pipes and eventually clogging them or altering their grade. The best average grade for drainage of this kind is from five to eight inches fall in every one hundred feet; and the fall should never exceed twelve inches to the hundred feet. Where the length of either the laterals or the main drain is of considerable length it is a good plan to intercept the line of drain by introducing silt-basins. This will afford an opportunity of inspecting the working of the drains and will also prevent, to a large extent, their stoppage by the introduction of foreign matters. The cost of thus draining a field—the pipes being laid thirty feet apart—should not exceed fifty dollars an acre.

The construction of the roads and paths should follow the general surface grading and the laying of the drains. The preparation of the sub-grade of the roads and paths should be performed at the earliest possible moment—and in fact, the construction of the roads should be pushed forward with the greatest possible rapidity up to the point of the final finish of the surface. The reason for this is that the greater the amount of traffic upon the sub-surfaces of the roads and paths the more tightly will they become compacted, and hence the more durable. The heavy traffic that is inevitable during the construction of the grounds—especially when the house is being built at the same time—will tend to form wheel-ruts and these, if allowed to remain, will disintegrate the body of the road. Hence it is important that these ruts, as they appear, be repacked with the proper road material and maintained to the correct level. This being done, the roads will become hard and

durable at just the points where the ensuing traffic will be greatest. It is a point of vital importance.

The following is an epitome of the generally accepted specification for the building of a macadam road, suitable for a private place:

Excavate to the required level of the sub-grade of the road bed. Remove any perishable, or spongy or unsound matter in the road bottom and replace same with sound material. It is important that the material used to replace excavated matter should be similar in quality to that forming the body of the road bed, otherwise the durability of the road will not be uniform. The cross-section of the road should have a rise in its centre equal to one-sixteenth of its width. The eventual curvature of the cross-section of the road depends upon the accuracy with which the ground foundation has been shaped and trimmed. Original inequalities cannot afterwards be corrected by the application of varying depths of broken stone. This "trick" is frequently resorted to in order to cover up poor workmanship, but merely results in producing a road body of unequal strength. A simple method of securing a uniform cross-section is to construct a wooden frame of the same width of the road and shaped to the required curvature of the surface. The grading should be continued until the "frame" fits at all points. Unless the ground foundation is composed of hardpan or other solid material, it should be rolled until the surface has become hard and firm. A slight application of water in advance of the roller is beneficial. Upon this finished earth surface is placed 6 inches of $\frac{3}{4}$ -inch broken stone. It should be spread in two layers—each layer being spread to a rough thickness of $3\frac{1}{2}$ inches—each being rolled to a finished thickness of about three inches. Upon the last layer of stone there should be spread three-quarters of an inch of clean sand, or very sandy loam, and rolled until it has become thoroughly compacted with the stone. The foundation is now ready for the reception of the "screenings," which should be spread to a depth of three inches and rolled to a depth of two and a half inches, or enough more to bring

the road to the required level. Some road builders prefer to use a smaller size stone for the second layer. On roads of a greater depth than the one here specified it is probably a sound idea. The screenings should be spread and rolled in two equal layers and kept thoroughly moist while the rolling is continued. The surface thus finished should not be used for at least two or three days. As a matter of practice the screenings should not be applied to the road until all the work of construction on the property has been fully completed. And it is even a good plan to allow the road to stand through a winter before the screenings are put on. In this way any faults that may appear in the road can be repaired without disturbing the finished surface. The construction of the paths should be similar in principle to the construction of the roads. If similar material is used in their construction, three to four inches of the broken stone and two inches of the screenings will be sufficient. In order to lessen the cost of the paths the broken stone can be replaced by cinders, slag, or old bricks. The cost of building a first-class macadam road, as here specified, should not exceed a dollar and a half a running foot for a road fifteen to eighteen feet wide.

A road completed, and no matter how well constructed, must be properly and constantly maintained. The best of roads will give way beneath the friction of traffic and if not duly cared for will disintegrate in time beyond the point of maintenance. The following are the chief points which should be attended to in the care of a road: Gutters should be kept clean in order to insure the running off of the water; any accumulation of liquid or soft mud should be removed from the surface of the road; it is especially important that snow or ice be removed from both the road and the gutters during times of thaw; heavy rain storms are apt to form small hollows in the road surface and to soften it so that it is susceptible to the weight of traffic. Hence after every rain storm of any force the road should be well rolled; if through neglect or other cause hollows, ruts or wheel tracks have become permanent, they should be picked to a depth

of two or three inches, or to a depth sufficient to insure the binding of the new material to the old body of the road. The parts thus restored should be maintained with particular care until they have become thoroughly consolidated with the main body of the road; and, finally, it frequently happens that the larger stones from the sub-foundation work their way up to the surface from the action of the frost. Such formations cause great damage to the road and should be attended to without delay.

Upon the completion of the roads and paths, or upon completion of a sufficient length of them to allow leeway for accurate work, their edges should be lined with turf, or cobble-stone or brick gutters; and if lined with either of the two latter they likewise should be edged with turf. Unless this be done the first heavy rainstorm will undermine the edges of either the road or gutters. Following is a suitable specification for the construction of either a cobble or brick gutter: the excavation for the reception of the gutter should be not less than twelve inches; where there is ample room the width of the gutters should be from two feet to two feet six inches, but never less than eighteen inches. The concavity of a gutter should never be less than four or more than eight inches. The bottom of the excavation should be hard and unyielding; if it is not so naturally it should be made so by replacing any soft or yielding material by hardpan or gravel. Upon the bottom so prepared a five inch layer of good clean bank gravel should be placed and tamped down to a compact and even surface. Upon this layer spread a sufficient amount of clean soft sand to such a depth as will bring the top surface of the cobbles or brick to the required level. The cobble stones should be from four to six inches long and from two to four inches wide. Both cobbles and brick should be laid by hand and hammered tightly into place. When thus laid they should be covered by clean fine sand which should be brushed well into the joints. Brick or cobble gutters should never be grouted in cement.

Where grades are not steep or abrupt, or where there is not apt to be a strong

or concentrated flow of water, turf gutters are frequently used and are at times more appropriate than either cobble or brick. They are but a continuation of the lawn and should be made so wide that their presence is not noticeable, and sufficiently sweeping in their curve to allow of the use of the lawn mower. They are most appropriate where the lay of the land bordering the road is irregular; that is, where a continuous gutter of brick or cobble is not required and where the surface water can be emptied at frequent intervals upon the lawn proper or at other convenient points. In places where the road is not edged by stone gutters; it is customary to cut the turf to a sharp edge that projects above the level of the road about one inch; that is, about the thickness of the turf. This is not only an inartistic practice but bad construction. It amounts to the formation of a gutter and invariably results in continuous washout. The turf edging should be flush with the level of the road at its edge. It should never be cut with a knife of any kind but trimmed to a fine edge by the use of turf shears.

When the above operations have been performed the skeleton or frame work of the design is completed. There remains the spreading of the top-soil or the making of the lawn. Presumably the top-soil stands piled at various points where originally placed. During the progress of the work up to this point the sub-soil will have become hardened by general traffic upon its surface. Before spreading the top-soil, therefore, it should be roughly broken up and leveled by a generous use of the plough and harrow. And once more all debris—small stones, twigs and so on—should be carefully removed from the surface. The top-soil may then be spread over the prepared surface in even layers. A foot of good top-soil is not too much and less than five inches is too little. Such portions of the lawn as are to be devoted to plantations should be prepared at this time. Hence the top soil at such places should be placed to a depth of at least eighteen inches. When this has been done it should be ploughed, harrowed, cross-harrowed and recross-harrowed and

raked until it has been brought to a perfect state of minute pulverization and cleanness. While thus tilling the soil some thirty to forty loads to the acre of thoroughly decayed compost stable manure should be worked into the soil. A somewhat more generous supply should be worked into the planting areas. Nothing is simpler to make, and nothing so rare to see as a really fine lawn. Cleanliness, deep and fine cultivation, plenty of good loam and manure, and the best of seed are the essence of its making.

Select a moist and windless day for sowing the seed. The seed should be sown evenly and in quantities of not less than four bushels to the acre. After sown, the seed should be first raked into the soil by a fine-toothed rake and then firmly rolled in place. Having done so much, it will not do to "lay by" and leave the rest to nature. Nature knows nothing of the making of a lawn, and does in fact prefer the growing of weeds to the growing of fine turf. A lawn is seldom completed, and in this country it is in truth always in the process of making. Until it has attained its first growth—that is, until it calls for a first cutting—it should be rolled at least once a week. The cutting should be continued at frequent intervals, as often, in fact, as there is a blade or two to cut. Where quick results are desired, the use of "sod" is of course possible. It is frequently the custom, before lifting the top-soil, to preserve the sod for the making of the future lawn. It is generally supposed that a better lawn can be secured by the use of fine turf rather than by the slower process of seeding. This is by no means a general truth; it is rather the reverse. And as a rule it is advisable, and certainly more economical, to save just enough of the original sod to border the roads and drives and banks, leaving the remainder to enrich the top-soil. And as a matter of fact, it is generally cheaper to purchase sod from nearby sources, if possible, than to save it. However, this is a question to be settled by local inquiry. Grass should be cut into turfs three feet long, one foot broad, and one to one and one-half inches in depth. If piled during the early spring months it

will remain without damage for several weeks. Again, it is generally supposed, other things being equal, that sod is valuable in proportion as it comes in large unbroken strips. And this is another fallacy. The truth is the exact reverse. The only value "large sod" has is that it is easier to lay. Sod broken up into comparatively fine pieces will grow quicker and can be laid to a more accurate level.

Sod is invaluable in connection with constructive earth work. I have already pointed out that it should be used in connection with the borders of roads and paths. In addition to these places it should be used to maintain all steep or formal terraces, long sloping banks, as well as to outline the edges of flower beds and so on. The entire surface of formal terraces should be sodded and have at least a two-foot border of sod at both top and bottom. The face of long and irregular slopes should be protected from washouts by laying strips of sod obliquely to their axis every five or ten feet according to the steepness of the slope.

Planting is a subject of sufficient importance to demand an article devoted to its exclusive requirements. And yet an article of this nature cannot afford to entirely ignore a subject of such large interest.

In connection with the majority of places undergoing complete development there are usually one or two or more trees that absolutely interfere with the constructive work of the plan. They must be either cut down or transplanted. If they exceed nine inches in diameter they should be cut down, or an expert tree mover should be employed to transplant them. It is a mere waste of time, money and energy for the amateur to attempt the transplanting of large trees. Hence the instructions here given are applicable only to trees which do not exceed, one foot from the ground, a diameter of eight inches.

To prepare a tree for moving, dig a trench some three or four feet deep and four or five feet from the bole of the tree. The root ball thus formed should be undermined until it has the appearance of an inverted cone. About one

foot of earth should be left under the root ball in order to maintain it in an upright position while it is being prepared for moving. The ball should be reduced in weight as much as possible. To accomplish this, scrape about four inches of earth from the top of the ball, or until the roots begin to show. The earth should also be picked from around the edges of the ball to such a depth as will leave all of the finer roots exposed and until the larger roots cease to be pliable. The finer and more pliable roots should then be wrapped around the ball and held in place by moist matting. The tree is now ready to be moved. The new hole should be excavated at least one foot deeper and two or three wider than the size of the root ball, its size being determined by the extreme length of the roots when fully extended. This extra space and depth should be filled, while the tree is being placed, with well-decomposed manure that has been thoroughly intermixed with good soil. Care must be taken to prevent free manure from coming into direct contact with the roots. When the tree has been placed in an upright position the roots should be unwrapped and drawn out to their natural positions and held in place by tightly packing the prepared earth around them. If the soil is at all dry, it must be well moistened with water while the packing process is going forward. If the planting is performed during a dry spell, a subsequent mulching of manure, grass mowings or old sod will be beneficial. When once in place it must be securely "guyed" until the roots have had time to attach themselves firmly to their new site. The crown of the tree must be "cut back" in proportion to the loss of or injury to the roots. In practice, the last year's growth should be cut back so that but one bud of the previous season's growth remains. Early spring, late fall, or, providing the tree ball has been previously prepared during winter with a frozen ball, are the best times for transplanting trees. The mechanical requirements for moving trees of this size are very simple and will readily be suggested to anyone with the smallest practical talent. A few ropes and planks, a stone-

bolt, possibly a windlass and a pair of stout horses and a little ingenuity will be all that is required. Apart from the care that is observed in the purely mechanical process followed in the moving of trees, ultimate success very largely depends upon the nature of the weather. The moving should be done rapidly, and when possible a day should be chosen which is moist, calm and overcast.

A few words may be added as to the planting of the usual assortment of shrubs and trees of the ordinary nursery sizes. It is an open question whether the fall or the spring be the better time for general planting. I believe greater success is attained in the spring months, and, as a matter of fact, more planting is undertaken at this season of the year on account of the general tendency to commence work in the spring months rather than in the fall months. Accompanying the general plan there is, as a rule, a planting list which comprises the stock required to at least outline the general planting scheme. The order for this stock should be placed early in the spring, so that an early delivery can be counted on. If the plants are delivered before the ground has been prepared for their final reception they should be "heeled in" at some convenient place. To do this it is merely necessary to open a trench sufficiently wide and deep to receive the roots of the plants. The plants should then be placed in the trench and their roots lightly covered over with soil. This will keep the plants from drying out and, at the same time, prevent them from maturing too quickly. They must not, however, be so left for more than two, or, at the most, three weeks. If a longer period than this is required to prepare for them a permanent site, they must be properly planted and left undisturbed until the following planting season.

Planting in itself is not a difficult process, and given well-grown and healthy stock, success depends largely upon attending conscientiously to commonplace details. For the average place it is better, safer, at least, to purchase comparatively small stock that has been transplanted in the nursery rows. The trans-

planting of stock insures well-grown and fibrous roots—the one essential of all importance. Fine evergreens should always have natural balls of earth about their roots. This does not mean that upon shipment the nurseryman should pack the roots with earth and hold it in place by wrapping it about with burlap! A root ball implies a root so thoroughly supplied with fibers that the earth is held in place by their compression. Hence, an examination of plant stock upon its reception from the nursery is one of the first principles of successful planting (in these days of commercial nurseries). The best of handling cannot insure efficient growth from poorly grown plants or plants dried out in transit from lack of careful packing.

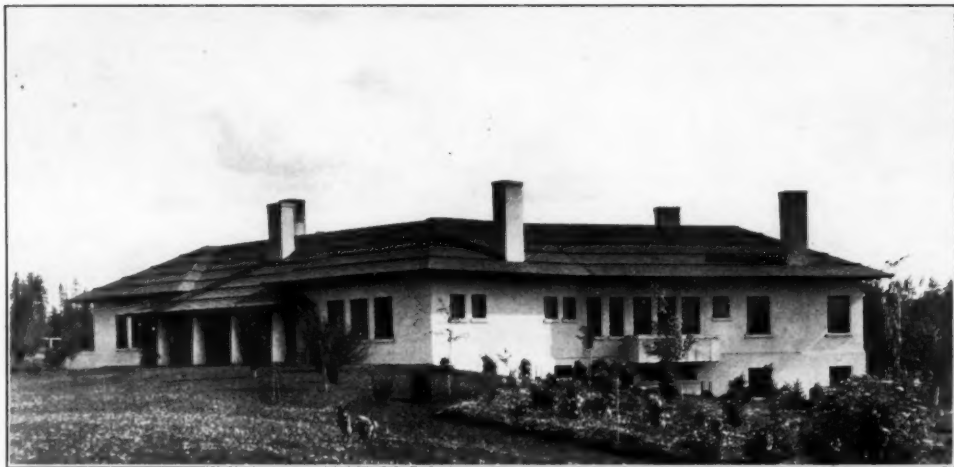
Holes for individual plants must be

prepared as units. The holes for the reception of the plants must be made sufficiently large to receive the roots without cramping them or bending them into unnatural positions. The roots should be spread out to their full length and to their natural levels and held to position by packing the soil tightly about them. If the soil is dry, water should be added to the earth as it is being packed about the roots of the plants. The plants should be pruned of about half of their previous year's growth. It is a good practice to pack the earth about the roots after they have been planted from two or three days. The height of the earth about the stem of the plants should be the same as it was when the plants were in the nursery.



A RESULT OF THE LANDSCAPE GARDENER'S SKILL.

Chas. A. Platt, Architect.



RESIDENCE OF F. H. GRAVES, ESQ.

Spokane, Wash.

C. Ferris White, Architect.

THE SUBURBAN RESIDENCE OF THE PACIFIC NORTHWEST

A Few Examples of Recent Work

The better private dwelling characteristic of any part of the country at any one time is usually expressive of the degree of economic maturity which that particular locality has reached. In the east, a great deal of wealth has not only been accumulated but inherited, and there are many rich people who are no longer as actively engaged in business as were their fathers and grandfathers. Men of this kind are naturally willing to sink a much larger proportion of their capital and income in building and maintaining expensive city and country residences. They do not need their money to the same extent in business; and they or their wives have acquired interests and tastes, which demand for their satisfaction a good deal of leisure and elaborate houses, in which to entertain and exhibit their costly purchases.

New Yorkers, Philadelphians and Bostonians reached the stage at which they were willing to build and maintain very expensive residences almost a generation ago. The middle west is just beginning

to enter upon a corresponding stage of development. There has during the past five years been a marked increase in the cost of the houses erected by well-to-do people, and a certain tendency to build up country estates, which imply leisure on the part of their owners and a certain detachment from business. The tendency has not gone very far as yet; and its effects upon domestic architecture in the west are minimized by the fact that western millionaires as often as not build their elaborate country houses among the hills or on the coast of New England. Undoubtedly, however, it will become in the course of time increasingly dominant.

On the other hand in still newer parts of the country, like the Pacific Northwest, men of even very considerable wealth are not as yet prepared to sink any considerable proportion of their capital in their residences. What money they possess they have usually made themselves. It is to a large extent tied up in their business, and they usually

have plans for the extension of their business which demand the investment of a great deal of additional capital. A man in such a situation, even though he be a millionaire, and even though he wishes a spacious and a good-looking residence, is obliged to impose certain limitations both upon himself and on his architect. He usually buys a few acres, more or less in the neighborhood of the city in which his business is situated;

built in a fragile manner and of ephemeral materials, but it is almost equally certain to fail to satisfy the taste of his children and perhaps of himself twenty years later.

The better class of residences, now being erected in the Pacific Northwest, a few of which are illustrated herewith, belong to the type roughly indicated above. They belong to a phase in the local development of domestic design



THE FINUCANE RESIDENCE.

Spokane, Wash.

Cotter & Malmgren, Architects.

and he usually erects a house costing anywhere from \$25,000 to \$60,000. In his house he wants as a rule a good deal of space; and in that case very little money can be spent either upon good construction or upon the treatment of the grounds, and the man himself is not conscious of missing anything in building as he does, because all his neighbors are doing the same. But such a residence is obviously unpermanent from every point of view. Not only is it

intermediate between the Queen Anne cottage and the fully formed suburban or country house. They necessarily betray the limitations imposed on their architects, both by the restrictions of their clients and the limited amount of money placed at their disposal, but once these limitations are granted, they are usually excellent examples of the peculiar type to which they belonged.

The architects practising in the Far West are usually men, who have been

trained in the Eastern schools, and have obtained some experience in Eastern offices. It is not to be expected, consequently, that their work will differ in any essential respect from the corresponding type of house erected in the East and in the Middle West. American architects all over the country are subject to a common run of ideas and are realizing or trying to realize a common standard of professional practice.

in design than the houses erected, either in the East or the Middle West during their analogous stage of economic growth. Their average, that is, is much higher than the average New York or Philadelphia suburban residence of the seventies or eighties or than the average Middle Western suburban residence of the nineties and after. The domestic architecture of the Pacific Northwest has apparently made a more promising



THE STRAHORN RESIDENCE.

Spokane, Wash.

Cotter & Malmgren, Architects.

They differ far more in their opportunities than in their ability to take advantage of what opportunities they have, and the value of their work must be estimated in relation to the economic and aesthetic conditions, prevailing in any particular locality.

It should be added, however, that just because these houses are fairly comparable to the corresponding type of house now being erected in the East and the Middle West, they average much better

start than that of any other section of the country. It will have to repair a much smaller number of mistakes and recover from the influence of fewer bad habits. As soon as the country reaches a more mature stage in its economic development progress will be more rapid.

Although it may be dangerous to draw too many inferences from the limited number of examples, illustrated herewith, we shall risk a few observations on the tendencies in design exhibited by



Spokane, Wash.

THE WAKEFIELD RESIDENCE.

Cotter & Malmgren, Architects.



Spokane, Wash.

GOV. M. E. HAY RESIDENCE.

these houses. In the first place the architects and their clients take more kindly to the so-called freer domestic styles than they do to those which demand more formal treatment. Out of all the dwellings reproduced, only two have any tendency towards the colonial, and neither of these designs can be characterized as a brilliant success. On the other hand several of the gabled houses are really picturesque and striking in

any other people; and inasmuch as frame construction will continue to dominate the domestic architecture of the coast for another generation, a frank application of Japanese methods might introduce an element of permanent value into the design of wooden frame houses in the Far West.

Another less desirable tendency is the imitation in the Northwest of the Californian predilection for the Mission style,



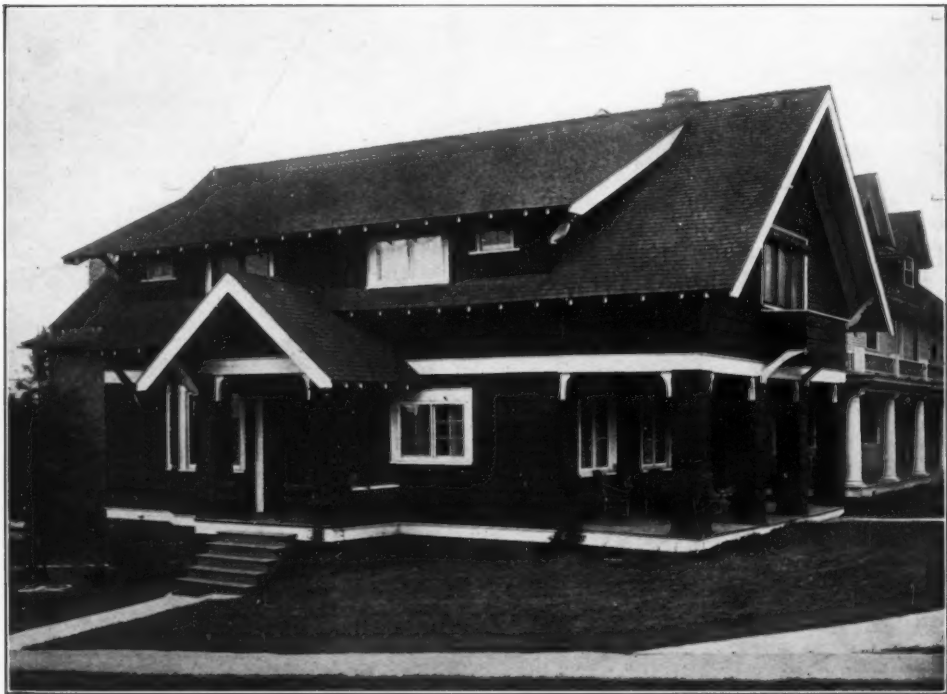
THE W. F. SHEARD RESIDENCE.

Tacoma, Wash.

Russell & Babcock, Architects.

appearance, and betray a genuine feeling for the proprieties and improprieties of this type of design. In the Northwest as in California, the architects in their building of wooden houses are obviously much influenced by Japanese models and it is a pity that they either do not or cannot allow this influence an even greater weight. The Japanese have given a higher architectural value and expression to wooden frame construction than have

and it can be defended by fewer good reasons in the cases of Washington and Oregon than it can in the case of California. Californians naturally take a sentimental interest in the old Mission buildings, which are scattered around their state; and their attempt to adapt the style to modern uses, while undoubtedly a weakness, is also undoubtedly an amiable weakness. But there were no Missions in the Northwest; and the Mis-



HOUSE AT LINCOLN PLACE.

Spokane, Wash.



ANNIE J. AND ELLIS F. LAWRENCE RESIDENCE.

Spokane, Wash.



Spokane, Wash.

F. L. CLARK RESIDENCE.

Cotter & Malmgren, Architects.



Spokane, Wash.

HOUSE SHOWING INFLUENCE OF THE REGION.

John K. Dow, Architect.



THE CROMMELIUS RESIDENCE.

Spokane, Wash.



REGINALD H. PARSONS RESIDENCE.

Seattle, Wash.

Somervell & Cote, Architects.

sion style and method of construction has never had any excuse for existence—either historical or economic. The attempt to imitate it in the northwest is bound to result in a feeble and frivo-

lous or a rudimentary style, whose interest is wholly historical and emotional and not at all technical. The sooner it is abandoned and more original work inspired the better.



THE CORBALLY RESIDENCE.

Spokane, Wash.



New York City.

CORNER OF 116TH STREET AND BROADWAY.

A case in which the curve of the street comes to the aid of a designer, who has reason to thank that very fortunate circumstance.

CONTEMPORARY APARTMENT BUILDING IN NEW YORK CITY

H. W. FROHNE

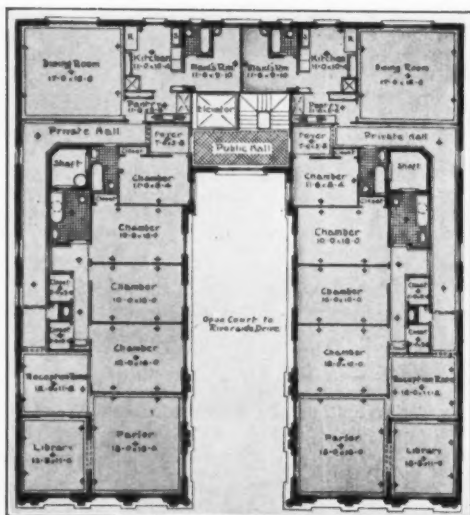
Attention was called in these columns in the March issue to contemporary German apartment houses. Their general attractiveness, substantial construction and flexibility of plan were remarked and compared with our own efforts. The responsibility for our failure to measure up to unprecedented opportunities was laid at the door of the lack of professional and popular interest in the subject, together with the amazing zeal of the professional real estate speculator to avail himself of conditions for his personal aggrandizement at the public expense.

In order that the statements made in the article referred to above be not understood as implying a sweeping condemnation of the entire field of American apartment house building, some qualifications must be made. In the first place, there is no intention to set at naught the excellent and disinterested work of the New York Tenement House Commission and the Society for Improving the Condition of the Poor whose efforts have resulted in much permanent good. It is to be set to the credit of such bodies, of course, that the New York Building Code was so modified as to eliminate some of the worst features of the former indecent and unsanitary type of tenement which prevailed and was profitable to the speculator under the old code. The allowable percentage of the area of the site which the building might occupy was so materially reduced as to give each room daylight, if not direct sunlight; the superficial area and cubical contents of the rooms were increased; better and more numerous plumbing facilities were made imperative; and the conventional type of house on a twenty-five foot frontage was made speculatively unprofitable and the maximum encouragement was offered to build larger houses yielding the greatest

benefit of the improved law to their inmates.

In the second place, it would hardly be fair to leave unnoticed the efforts of some of our most conscientious architects, who have given much thought to the solution of the tenement house problem in New York, and who are constantly gaining a better understanding of its difficulties. To be able to carry out their ideas they have had to interest independent non-speculative capital, and thus far these enterprises, though highly successful in themselves, have not been numerous enough to attract general public notice and have, as a rule, been conceived, or at least, regarded, in a spirit of philanthropy. Their efforts have been well directed, but more concerted action is necessary before a material influence can be exercised on prevailing tendencies. Until the impression become general that apartment houses, legally known as tenements, should be built to stand economically for a great many years and that therefore it pays, in the long run, to build them well rather than shoddily, the fundamental economic weakness of our system of building houses of this kind cannot be corrected.

The New York Chapter of the American Institute of Architects has evinced a new interest in the tenement house problem of the metropolis, which is intended to foster public interest in the matter. To secure the co-operation of owners, it offers a prize annually to the owner of that tenement or apartment house which, in the judgment of the Chapter, is most meritorious from an architectural standpoint. Whether the owners, who at present care little for the opinions of architects, will, in the future, consider it sufficiently worth their while to seek the honor for the publicity which such a distinction might give them, re-



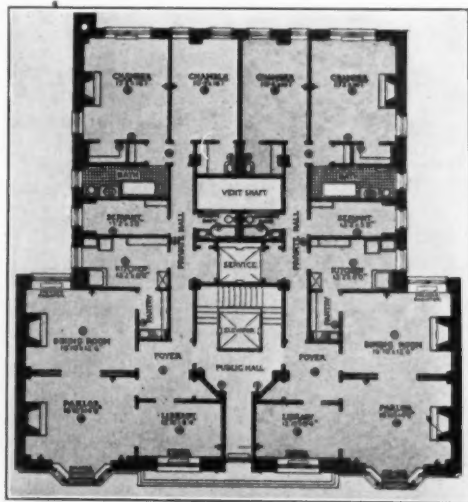
Typical Floor Plan of Apartments with a Single Street Court—"The Mira Mar."
452 Riverside Drive, N. Y. City.

mains to be seen. The intention, at any rate, is of the best and the idea is worth a trial.

There are, of course, an increasing number of large operations known as co-operative apartment houses, in which there is beginning to be shown some appreciation of the value of economical and attractive design and integrity of construction. These projects are so much in the nature of the special case, however, that their effect on the rule is almost negligible.

In speaking broadly of the apartment house in New York it is necessary to distinguish two general classes, those of five and six stories, which are still permitted to be built non-fireproof, and those of more than six stories, in which the code compels fireproof construction throughout. It is the latter class which furnishes the majority of our illustrations. These are, of course, much more expensive undertakings than the ordinary house which is inhabited by the typical New York family by the tens of thousands. These tens of thousands of families are the social majority of the metropolis and it is for them that better apartments must be provided, while this smaller and expensive, though by no

means numerically, small class of which we are illustrating the latest phase, are abodes of choice and not of compulsion. Do these larger and most exclusive apartments, which we are publishing, provide safe, healthful and, as far as possible, homelike surroundings? Does the well-to-do tenant get good value for his money? To answer this question, let us admit in evidence typical floor plans of two representative houses of this kind just completed. In the first place, compare their pretentious façades with the plan arrangements of the two houses. What is the verdict? The story here is the same relatively, we are forced to admit, as in the thousands of cheaper apartments which we have designated as the habitations of New York's social majority—much superficial pretense, little substantial fulfilment. The hand of the speculator is again in evidence, and though the extent to which he can trade on popular credulity is much greater in these expensive projects, yet fortunately the law limits him in his construction and insures a more permanent form of building and better protection against the rapid spread of fire, though scarcely a higher standard of planning. A slight conflagration in one of the newest of these houses in New York recently

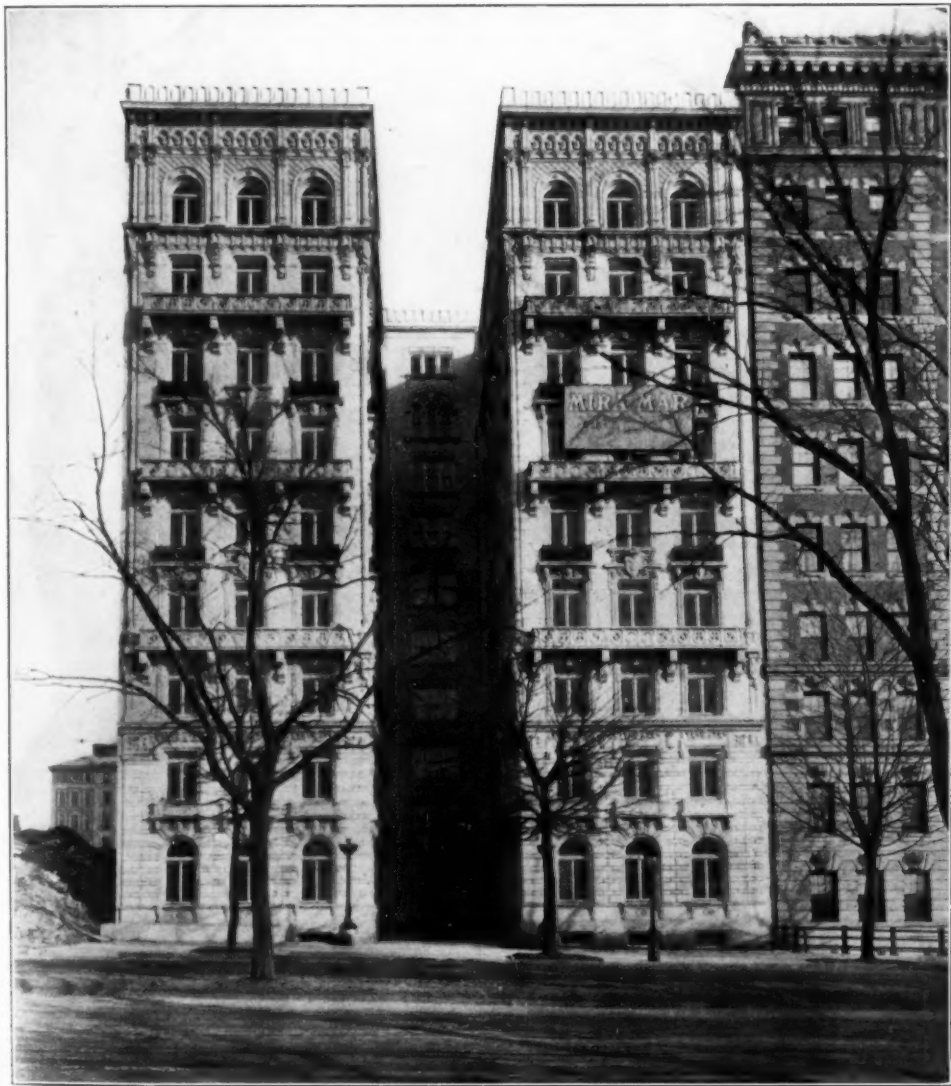


Typical Floor Plan of Apartments with Double Yard Courts—"The Ardelle."
Opposite Grant's Tomb, N. Y. City.

was readily confined to the part in which it started, although there was danger to life because of the failure to properly enclose the elevator shaft with fire-resisting materials.

It would be well if the building code in New York, as far as it relates to construction, could be so modified—

gradually it would have to be—by the prohibition of certain combustible materials now allowed and the substitution therefor of fire-resisting materials, so that gradually it would get to be about as cheap, in first cost, to build on an entirely fireproof basis. A start was made in this direction when fireproof



"THE MIRA MAR."

452 Riverside Drive, New York City.

An all fireproof apartment in which there are some attempts to produce an attractive design. This house is a good example of the lack of correspondence between externals and internals. The show of the front is but poorly supported by the planning of the apartments.



Northeast Corner of 111th Street and Broadway.
New York City.

An attempt to avoid the projecting cornice.

stairs were required and since all doors leading to public halls have had to be covered with metal. Why not go further and forbid the use of public halls of any exposed combustible material whatever; compel all elevator and dumb-waiter shafts to be of incombustible materials throughout and in the case of exposed elevator shafts compel the complete enclosing of the same at every floor with wire-glass or other suitable fire-proof material; forbid the use of wood lathing and compel the use of a hard plaster on metal lath, stipulating that fire-steps must be established under all partitions and against all walls which are furred, by means of a packing of some suitable incombustible material to check the communication of flames from one floor to another? A device which could with profit be borrowed from the German apartment houses is the provision of a service stairs completely encased by firewalls and provided at each floor with fire doors. Such a feature could be made an effectual fire escape as well as a very useful stairs for servants when there is no elevator.

Of course, all modifications of the building code which would make it more expensive to build and which, moreover, would curtail any given industry would

be fought tooth and nail, on the one hand, and rejected in other quarters as not worth while in proportion to their cost. Such innovations would cost dearly, and the fact that they cost dearly enough to prevent a certain class of economically undesirable building operations would be one of the very best reasons for their adoption. To make the undesirable class of building impossible is the only means through which we can ever hope to get still further improved housing conditions for the tenement house dweller who is forced by circumstances to spend the major portion of his life in this kind of an abode.



"The Ardelle."

Opposite Grant's Tomb, N. Y. City.

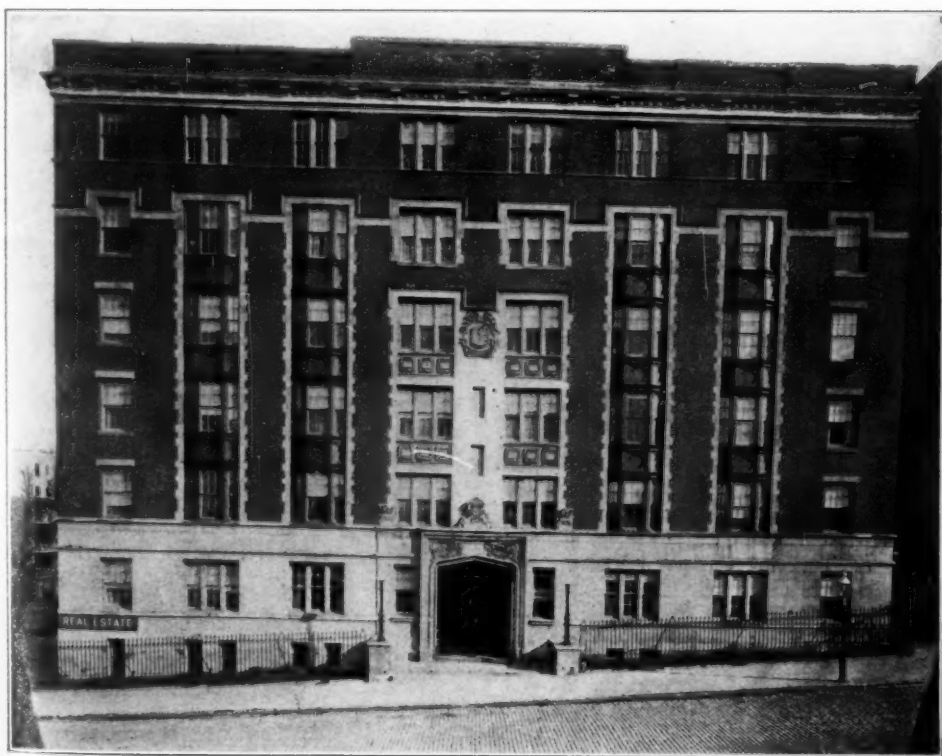
Architectural features worked for all they are worth, but with a questionable result.



610 TO 616 WEST 116TH STREET.

New York City.

An unsuccessful attempt to create a feature by the gabled treatment of the cornice.



SOUTHEAST CORNER OF 127TH STREET AND RIVERSIDE DRIVE.

This facade looks as though it could make good on the inside what its external appearance promises. It is a step in the right direction.



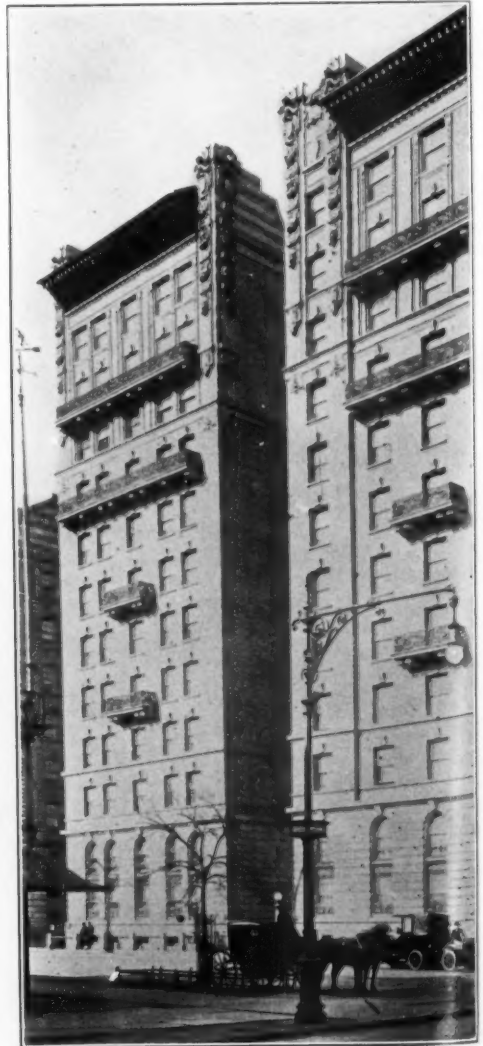
539 West 112th Street.

N. Y. City.

The use of color in the brickwork and the treatment of the fire escapes are worthy of notice.

The ideas which are uppermost in the mind of the speculative builder of apartment houses of all classes in New York

to-day are to carry on as many operations of as many units each as his capital and the demand will permit. The ability to dispose most rapidly of his crop is a measure of his ability to make money and continue to shape the future in a way entirely agreeable to his personal interests. In his quest for variety in these undertakings he has, at rare moments, allowed himself to reflect that



Northwest Corner of 110th Street and Broadway.

N. Y. City.

perhaps a concession now and then in the way of a little more liberal allowance in planning, a slightly better grade of materials and labor could not operate otherwise than to keep him in the good books of the moneyed interests and, at

better grade of surface or facing materials making for the maximum of visible display. The power of advertising has affected him as it has most every other business and he was, in fact, one of the first to fall in line. With the



RIVERSIDE DRIVE, BETWEEN 127TH AND 128TH STREETS.

New York City.

An attempt at respectability—of internal appearance—but too much influenced by bad examples in its vicinity.

the same time, postpone a little more his eventual dispossession as a social menace by the complaining tenant.

The concessions to which he has given his consent at such exceptional times have been generally in the employment of a

present and probable future conditions of labor and the prices of materials it will become more and more impossible for him to spend as much money for sham and display as he has been accustomed to. In the meantime the tenants



CLAREMONT AVENUE, LOOKING TOWARDS 116TH STREET.
New York City.

This motley crowd faces the quadrangle of Barnard College, which the speculator has not been slow to use as an asset.



137TH STREET-RIVERSIDE DRIVE, LOOKING NORTH.
New York City.

Some blocks of the "latest" in non-fireproof New York apartments. It is a great pity that an avenue commanding so beautiful an outlook should have been given up to the purpose.



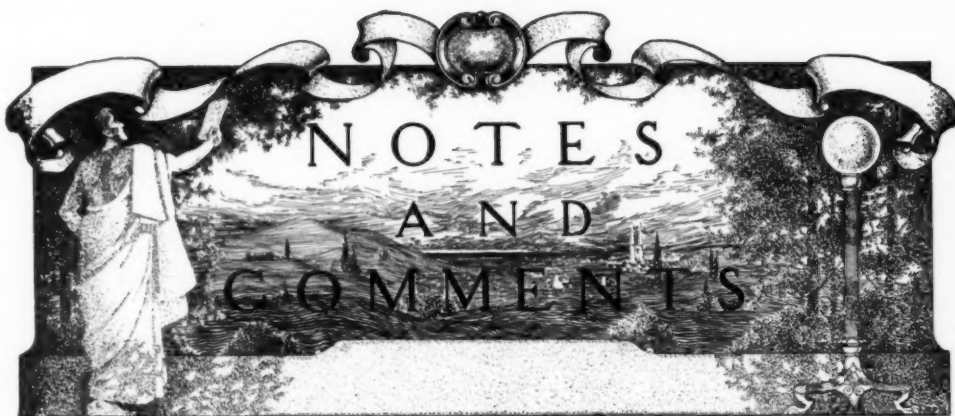
LOOKING NORTH ON RIVERSIDE DRIVE FROM 116TH STREET—ONE OF THE MOST ACTIVE SECTIONS IN THE FIREPROOF TYPE OF APARTMENTS.

have got to expect that "rich" wrought-iron fence with its electric globes, the "highly ornamented" façade and the "elegant decorations" in entrance halls. All this they have come to accept as a matter of course, and if the real estate speculator is going to carry them along he must constantly provide the "appearance of more appearance," or something else more substantial. Which is he going to choose? The increasing exodus into the suburbs and within a commuting distance of City Hall is the beginning of a mighty revolt of which the city real estate market will ultimately have to bear the brunt. When apartment risks, which to-day are still so optimis-

tically regarded, become a poor form of security for much smaller sums than those which they were built to realize, then a readjustment of some sort must come about. Whether this readjustment will be gradual or otherwise it is yet too early to say, on account of New York's enormous capacity for development and of assimilation, but come it must. Does it not seem that co-operation with the architect in good standing is the most far-sighted policy that the real estate speculator could pursue just now for his own ultimate good. With the architect as his adviser, the position of the speculator as a public agent is bound to be bettered.



Northwest Corner of 141st Street and
Broadway.
N. Y. City.
Terra cotta used with discretion.



THE ARCHITECT AND FIRE PROTECTION*

The general problem of fire protection is one of importance to all directly or indirectly concerned with building interests. It touches the public, the owner, the builder less directly, the insurance interests very closely, and is of especial interest to the architect, and therefore it is a duty as well as a pleasure for the American Institute of Architects, concerned as it is in advancing the standards of the entire architectural profession, to be represented in the deliberations of this body.

Mr. Irving K. Pond, President A. I. A., delivered this paper at the convention of the National Protection Association at Chicago, May 19, 1910.

The subject of the relationship of the architect to substantial building and to fire protection is one of wide significance and with many ramifications. The matter is not so simple as at first appears, for it deals not only with the present status of building development, but with the past as well, and reaches far out into the future.

Speaking from his purely personal standpoint and regarding only his selfish interests, the architect might urge thorough and yet more thorough methods of building construction and protection, that the monument to his skill and genius may last throughout the ages, adamant against the destructive agencies of water, fire, climatic conditions, and shock. The architect likes to consider

himself as a maker and recorder of permanent history, but build as stably as he may, the Nile will undermine the foundations of Karnak and Luxor, fire will lay low the "Ephesian Dome," frost and moisture will sunder the massive buttresses and earthquake will scatter the columns of the temples which man has reared to carry the glory and fame of his race on through the ages.

But the architect of the present has to deal with other causes which go toward the unmaking of history as embodied in architecture. The changing conditions of everyday life act as destructive agents, so that the economic loss in the demolition of the present to prepare the ground for the future is as appalling in a way as is the destruction by any of the natural causes. The philosophic attitude to maintain toward the whole subject is, that out of each great loss must come some gain, and that no great good is attained without the payment of an adequate price. And so in considering the matter of permanent building and protection against the elements, we are brought face to face with the modern problem which is taxing the ingenuity and genius of our architects and economists, the problem of city planning for the present and the future.

The value of building for permanency is to be carefully considered where conditions are ever shifting and buildings to serve the special purpose of to-day may not meet the requirements of to-morrow. The logic of city planning must appear as keen as the logic of house planning, and the distorting of the function of one part of the city must appear just as chaotic and as fatal to the economic order as the derangement of the

*This paper was read at the convention of the National Fire Protection Association at Chicago, May 19, 1910, by Irving K. Pond, Pres. A. I. A.

functions of various rooms in the dwelling. The furnace room should be equipped to receive the furnace and fuel and calls for certain protection which need not be afforded to other portions of the house. To erect the furnace in the drawing room or to install the range in the boudoir is to derange the life of the household and stultify the meaning and design of the house and to presage a lapse into barbarism or to indicate a non-emergence from that estate; and thus is indicated the possible connection between city planning and logical construction and necessary protection. The logical planning of the city—the laying down of permanent lines of development, the laying out of permanent avenues of intercommunication and lines of transportation that the functions of the various portions of the city shall not be deranged, but shall be susceptible of logical and rational growth and development—bears directly on the matter of comparative stability of construction. The wisdom in creating city planning commissions and even in applying the theory to smaller districts becomes apparent and should be emulated in our own country by our legislative bodies, and warrant of law rather than individual initiative should bring about the desired result. This idea which has been in practice and has justified its existence for a long time in Austria, is coming into vogue in Germany and is just now being adopted in England. Various of our American cities are attacking the problem from some special point of view individual to the locality, but the wider problem in all its manifold bearings on social organism, industrialism, housing, sanitation, morals, and beauty has as yet to be conceived by the general body of American city planners. When our civilization is established and we cease to be a restless body pushing forever toward the frontier, our cities will partake more of the nature of fixed abiding places and less of the nature of the camp, as our residences to-day are smacking more of the permanency of buildings and less of the ephemerality of the tent. At such time sanely conceived civic centers will be established, calling for permanent structures suited to the needs of the locality and connected with other similar centers by great arteries of intercommunication, which themselves will be of a permanent and lasting nature. The industrial quarters, the residential quarters, the wholesale quarters will be distinctly differentiated as are the apartments of the logically designed dwelling, and will be susceptible of logical and predetermined growth. When the laws of economics shall

have been understood, when each man's duty to his neighbor and to the community shall be as thoroughly recognized as are the rights he arrogates to himself, when the laws of order and the love of beauty shall have been established in the heart of the race, the overtopping commercial structure in the center of other commercial structures or in the center of the residence district will be a thing of the past. In fact, in the logical city overtopping commercial structures will not, as now, add their disfigurement and their problems of transportation and of sanitation to the neighborhood they infest, and the matter of protective construction and protective appliance will be simplified.

It would seem impossible that the city should develop without certain destruction of existing forms and functions, and it will be seen that this condition should be recognized in the problem of construction and of protection, especially in the earlier stages of the city's development. The possibility that factories or that apartments may be torn down within a comparatively short period of time, to be replaced by buildings more extensive and devoted possibly to other uses, must affect the character of the construction, and to insure against great economic loss in the wreckage of existing structures the protection of life and property should be made to depend more largely upon external means and appliances.

Passing now the relationship of construction and protection to city planning and coming down to first principles, perhaps the most effective method of protection as it affects the community generally would lie in the operation of a law making the loss or damage to extraneous property or to life to hold against the owner of the property from which the fire spreads or the damage emanates. If the title to such property were vitiated until claims had been settled there would be less argument as to the desirability of protection in specific cases, and there would be smaller need to penalize neighboring buildings of a higher type. It may at some time be the function of the American Institute of Architects by itself or in conjunction with your able body to suggest such legislation and assist in its advancement; but without awaiting that time the Institute may find other methods of serving the community along these general lines.

The American Institute of Architects, the function of which not only is to elevate the status of the entire architectural profession, but to better the building conditions in general, is contemplating the formulation of a typical building code which shall be on a par

with its standard form of contract and general contract conditions and its standard specification. In this it needs the affiliation of the protection and insurance engineer. A body like the American Institute of Architects should be eminently fitted to undertake such a work, for it not only understands the technical details of building construction, but it comes to the work without any personal bias or any individual to serve, regarding only the highest good of the community. The architect's desire to build a monument for himself may in this instance be disregarded. The protection engineer, however, as represented by the National Fire Protection Association, is a necessary co-operator in any scheme of code formulation, for he has tested in his laboratory the action of the elements upon materials under the most severe conditions and can lend most valuable technical aid. His tendency, however, from the side of underwriting, would be to stiffen up on conditions, possibly to the disadvantage of the building owner, in order to protect his interests against possible losses. There would always be the suspicion of self interest in the advice of the underwriter. The formulation of a standard building code is quite as difficult as it is desirable, for its mandates must be in general terms, susceptible of application in all sections of the country. The architect would have a more open mind to the use of certain materials; for instance, unprotected cast iron in window mullions, or unprotected lintels supporting short spans of masonry, for he has known the metal used in these forms to stand the most severe test possible under actual conditions, whereas, under the artificial conditions of the laboratory the protection engineer has found them to fail. A liberal yielding by the architect from his point of view to that of the underwriter and a reciprocal action on the part of the underwriter would result in a code of great general value and equity. The architect would endeavor to study conditions so as not to penalize the high class building and legislate against the owner of such a building in favor of a neighboring building of lower type. The high class building should be protected against the lower class building by equitable legislation and the lower class building should not be allowed to jeopardize the entire neighborhood as well as itself. At the same time the higher type of building, especially when it runs into an inordinately high structure, should not be permitted to jeopardize the safety of life and limb within its own confines. This entire subject impinges on that of city planning and the logical distribution

of various types of industries and commercial activities.

As a practical phase of the general topic it is well to note the valuable work which the Board of Underwriters and your Association are doing in promulgating data with reference to fire protection. In relation to this a suggestion has been made by an eminent architect that this work is too technical in its nature to reach the generality of architects and owners who naturally should, and under certain conditions would make use of the provisions. At present the information with regard to the simpler forms of fire protection is contained in large pamphlets from which it is to be with difficulty extracted, and, moreover, the information is generally so put that it is not quite clear to any but engineers and architects who have had special practice along those lines. The few architects in the larger cities who pay any special attention to this subject, of course, keep up to the mark by special correspondence, consultation with insurance engineers, and constant reference to the Board of Fire Underwriters in specific cases; but the great majority of the architects of the country know absolutely nothing about the simplest matters of fire protection methods.

An educational propaganda can best be carried on by a series of primer-like leaflets of uniform size, mailed regularly, perhaps once a month, to every architect in the National directory, and to every builder, forming in due course a portfolio of technical sheets which can be replaced from time to time as they become obsolete. One leaflet could deal with brick enclosures for staircases, another with brick enclosures for elevators, giving diagrams of roof houses and doors, or even more important, a statement as to costs showing how little more of expense it involves to incorporate these refinements and how much it adds to safety, and finally how sure it is to be adequately recompensed by the saving in insurance. A series of leaflets on various types of fire doors and automatic and other metal window frames with an explanation of their advantages and a general statement of the cost as compared with wooden frames; data as to modern methods of mill construction embodying the latest types of girders and flooring and column and beam connections, should be given out in this form, as well as suggestions as to the construction of simple fireproof stairways, especially those of reinforced concrete, such as can be constructed in any town by a clever mason at small expense. An important feature would be a sheet on automatic sprinklers, with an ap-

peal for their use, and a statement of approximate cost of their equipment such as an ordinary building, 50x100, on the ground, and six stories high, would require; and it would be quite to be desired that the information given on these sheets as well as the information which is given to architects personally should be such that the architect could place reliance on it and not find after he had installed certain appliances and introduced certain specific methods of protection, that they were for naught and would have to undergo costly reconstruction.

It is not infrequent in actual practice that the means adopted or appliances installed under specific recommendation of one official of the Board of Underwriters have been summarily rejected by another official, and there is no redress. Remove and reinstall, or up go the rates or no rates will be considered. This is rather trying to the architect who has done his work conscientiously, and it forces a situation rather difficult of explanation to a client who naturally cannot comprehend the case and quite naturally conceives his architect to be at fault. Discretionary power on the part of public commissions is being considered and recommended as a panacea for modern legislative ills, and should be, where the drastic enforcement of non-elastic laws operates at the same time against private interest and public good. But on whom can such arbitrary power safely be conferred in the case of the general government? The Board of Underwriters has not to consider that question, for it need not be governed by drastic laws, but in all justice and logic may make the particular method suit the particular case.

A word as to certain specific architectural functions must be uttered, especially as it concerns a matter in which unenlightened and arbitrary rulings make or break. The architect is forever struggling to encompass beauty to endow all his forms with grace and charm; otherwise he is no architect. In this he is not aided by the Underwriters' rules, which tend more and more to make the objects to which they apply more crude and ungainly. This is especially so in the matter of frames and sash and the proportions of windows. So, too, with fire doors, and their appliances; and so with many matters. In many instances the matters might be adjusted by a commission, were its ruling not to be negatived immediately by another commission. These suggestions are not uttered in a carping spirit, but to indicate that equity between man and man should be conserved, equity between associations and capital also. The ethical element will enter into the opera-

tions of even a Board of Fire Underwriters and the aesthetic element will not down where the true architect is concerned; and so it must be apparent that questions of business ethics and personal fair dealing and questions affecting public taste, inhere in the problems of the protection and the insurance engineer and the powerful association they in general so wisely represent.

THE CITY PLANNING CONFERENCE

The Conference on City Planning, which was held in Rochester last month, proved even more of a success than those who were responsible for it had dared anticipate. There was a large attendance, and it was noted that practically every person present had done, or was now doing, something that is worth while. In other words, it was, to a rather unlooked for extent, a congress of "experts"—though doubtless the members of it would have been last to admit that. It was recognized on all sides, by the conferees, that there is much yet to learn about city planning, that the science—if distinct science it is to be—is still at the beginning of its development, and that the purpose of the gathering was to seek the light. But papers and discussion were of a high order or merit; there was evidenced the world of thought that is being devoted to the subject; and an inevitable result of the Conference, considering its purpose and its success, was the resolve to continue the committee, with some additions, suggested by themselves, and instruct it to arrange a third annual Conference for next year. Also, out of deference to the presence of Canadian delegates, the name was changed from the National Conference on City Planning and Congestion of Population to American Conference on City Planning—the last part of the long former title being dropped because it was perceived that the congestion problem was only one of many with which the city planners will have to deal. Among the architects present were John M. Carrere, Arnold W. Brunner, Grosvenor Atterbury, Milton D. Morrill and George B. Ford; but the architects were not more in evidence than were the landscape architects, the city officials, the civil engineers, the lawyers or the representatives of interested associations. In fact, all interests were represented pretty evenly and conferred together in the best of good fellowship, and with no jealousy, on the common theme.

**ANNUAL
MEETING OF
AMERICAN
FEDERATION
OF ARTS**

A year ago The American Federation of Arts was formed at a convention held in Washington. Last week this organization held its first annual meeting at the National Capital with representatives of nearly one hundred art societies, museums, civic improvement associations, schools and universities in attendance. Sessions were held morning and afternoon on May 17th, 18th and 19th, at the Willard Hotel, and many inspiring addresses were delivered by men of national reputation as leaders in the field of art. The territory covered by representation extended from Boston to San Francisco and from St. Paul, Minnesota, to Fort Worth, Texas. The range of subjects treated was equally wide and comprehensive, including the various branches of the fine arts and their divergent applications. The ultimate value of art to the individual and to the nation was emphasized by the Hon. Franklin MacVeagh, Secretary of the Treasury, in his opening address, and dwelt upon at some length by Senator Newlands on the last day of the Convention. The people, Senator Newlands declared, have gone far ahead of the legislators in appreciation of the fine arts, and he urged that steps should be taken to bring to bear upon them the weight of public opinion through their constituencies, reminding his hearers that in this, Congress need not be expected to lead, but to follow. The Hon. James L. Slayden, member of Congress from Texas, testified to the necessity of educating the legislators, in an address on "The Trials of the Congressman Concerning Art Matters," in which he cited Statuary Hall at the Capitol as a witness of ill-judged selection of works of art resulting in a perversion of good intention. Modern methods of education, in the professional school especially, were attacked by George de Forest Brush, the well known painter, who insisted that it was all wrong to surround students of art with ugliness, give them imperfect models, homely objects to copy, and expect from them beautiful products. Art, he maintained, had fundamentally to do with beauty; that it was hopeless to attempt to manufacture originality; that for inspiration one must turn back to the fountain source. Ralph Adams Cram voiced the same sentiment in a paper on "The Relation of Architecture to the People," emphasizing, however, ever more strongly the interdependence of the arts. Edward T. Hartman, secretary of the Massachusetts Civic League, in telling of "How to Reach the

People," claimed that the greatest responsibility rests upon the teachers in the Public Schools, who have the opportunity to make patent the difference between the good and the bad; in other words, to mould artistic taste while cultivating perception. That the Public Schools are awakening the art consciousness of the nation, Dr. James Parton Haney, director of art in the High Schools of New York, maintained, stating that the present teaching of manual training in the elementary schools is making "art a vital subject—a force that enters into every phase of daily life." What has been accomplished in Municipal Art, as well as the need of further effort in this direction, was set forth in an address, illustrated by stereopticon slides, by J. Horace McFarland, president of the American Civic Association, and an inspiring account of what the Municipal Art Society of Chicago has accomplished, was given by James William Pattison, secretary of that organization. Looking to the future, addresses were made by Percy MacKaye, urging the establishment of Civic Theatres, by Robert Underwood Johnson, recommending the upbuilding of State Art Museums, and by T. Lindsey Blayney, setting forth the importance of the inclusion of the History of Art in the College Curriculum. F. Allen Whiting, secretary of the National League of Handicraft Societies, told of what the arts and crafts movement had accomplished; E. H. Blasfield spoke on the "Ethics and Politics of Mural Painting;" a paper on the care of bronze statues in public squares was contributed by Herbert Adams; Glenn Brown urged the importance of the adoption of the Park Commission Plan for the artistic development of Washington in order that the National Capital should become a model city; Hon. Charles D. Walcott, Secretary of the Smithsonian Institution, gave an account of the upbuilding of the National Gallery of Art; James Frederick Hopkins told of the value of the International Congress on Art Education, and Mitchell Carroll, Secretary of the Archaeological Institute of America, set forth logical reasons for belief in archaeology as a force to counteract vulgarity and quicken appreciation for beauty; in addition to which Arthur Fairbanks, director of the Museum of Fine Arts, Boston, told of how the museums are reaching out to the people, and H. K. Bush-Brown, the sculptor, entered a plea for a reversion of the present system of education.

More than one brief discussion followed the delivery of the papers, but throughout a spirit of harmony was manifested. The papers while thoughtful, and in some in-

stances scholarly, were vital and tended toward accomplishment. The interest from first to last was well sustained and the possibility of team work in art as in other lines of activity was patently manifested.

WRECKING A SKYSCRAPER

The newspapers have made considerable, as was to be expected, of the demolition of the twenty-two story building at the corner of Wall and Nassau Streets, New York City, in order that a structure ten stories higher may be erected. The event has appealed to the provincial imagination even more than to the metropolitan, for outside of New York there is not a city in the world in which a twenty-two story building is not still a good deal of a curiosity; and outside of Chicago and Philadelphia, one might count on one's fingers the structures that are appreciably more than half that height. But a tendency to boastfulness is held in due restraint by the consciousness of the economic waste in tearing down a comparatively new structure of such proportions, and as firm as a rock still. Yet this waste is only that, exaggerated in form, which accompanies all progress—the substitution of new machines for old machines. But the wrecking of the building, though it has proceeded in perfectly orderly, matter-of-fact fashion, has been, perhaps, largely on that very account, an interesting process. It is not a much easier task to tear down a structure of steel than to put it up, and the magnitude of this task has called attention popularly to the undoubted fact that building engineering is a two-sided profession, and the wrecker is as big a man as the constructor, or is becoming so at least.

BOSTON'S REAL PROMENADE

The Charles River esplanade in Boston is nearing completion, and it is so far completed that it is very much used already, and offers in itself a very fine and unusual city picture. Considered from the standpoint of social service, it makes the rare municipal provision of a real, and popular, promenade. Its location makes it a delightful and convenient thoroughfare just before the offices open and just after they have closed; but all day long scores of people are walking there—and really promenading, for in the whole length there is not a store window to look into, a bargain counter to attract, or an office where

one may do business. But there is an abundance of fresh air, the ceaseless charm of dancing blue waters, the contrasting beauty of the broad strip of green grass and the orderliness of long, straight lines of wall and walk. Later, when trees and shrubbery begin to count, there will be other beauties in the esplanade; but at present it is a promenade, pure and simple. That this orderly, simple and successful treatment of a long urban waterfront is going to have strong influence, as an example to other cities, may be accepted without question. Considered by and large, that, indeed, may be the esplanade's greatest service. But it is wonderful how much it already means to Boston, and with what grace and charm it has stamped its individuality on that most individual of great American cities. One reason for this, doubtless, is its conspicuousness, for it is a striking part of the picture which all the residents, and all the friends of the residents, of half a score of suburbs beyond the river—including, of course, the university city—see as they cross one or the other of the main highway bridges.

It was inevitable that in the end the esplanade should triumph over the hauteur and conservatism of the Beacon Street houses, which have turned their backs to the river for generations—and that word "generations" counts in Beacon Street more than it would in Podunk—or New York. It was not a conquest to be made suddenly. The occupants of the Beacon Street houses having opposed the esplanade for years, one may not look for their enthusiastic approval before it is even completed. But it is clearly winning its way. One after another of the houses is turning its head and looking around to river and esplanade—shyly, of course, but lingeringly. When the fashion of turn-about really sets in, it will mean as radical, as ingenious and interesting, and doubtless a far more attractive change than was involved by the edict that Fifth Avenue projections would have to go. The first change has been a general tidying up. Back Street, as the river edge street used to be called, significantly, was never better than an unkempt alley in the old days. It is now as neat as a little suburban street. Some rather striking and pretentious bays—one might say "bows"—are appearing on the backs of certain of the Beacon Street houses; here and there the low adjoining garage has been given a flat roof, and made into a terrace; in any reconstruction, it seems to be recognized that the houses on the north side of Beacon Street now have no back—but two fronts. Also that the "straight front" may be well enough for

street wear, but that something else is required for the shore. It is all very interesting, to architect and to civic student, and to the citizen the esplanade has already become very satisfactory. And the end is not yet, for there is almost sure to be a marked increase in pleasure boating—possibly cheap rides on public launches—that will add much to the life and attractiveness of the scene.

**THE LATE
GEORGE
AITCHISON,
R.I.B.A.**

One cannot exactly say that either the practice or the theory of architecture has had a loss in the death of Professor George Aitchison, who died in England in May. But that is only because he was an old man and had done, in both departments, all that lay in him to do. Though the son of an architect, and an architect himself all his life, his own contributions to architecture were not of the first importance. The most noteworthy of them, doubtless, was the house of Lord Leighton, which attracted some considerable attention, at the time of its erection, for the logical unity and consistency of its structure and its decoration. These same qualities were exhibited in the decoration of the apartments of Princess Louise in Kensington Palace. The mere fact of being chosen as her architect by the most artistic of the royal princesses, was in itself a tribute of which the significance was safe to be appreciated in England. As the architect of the St. Katherine's Dock Company and the Founders Company, and as the architect of the offices of the Royal Exchange Assurance Company in Pall Mall, Professor Aitchison had and improved different kinds of opportunities for the display of his architectural quality. His professional eminence was recognized in his election as R. A. (1898), and still more emphatically in his election to the Presidency of the R. I. B. A. But he will be best remembered rather as a writer on architecture than as a practitioner of it. Up to 1905 he was Professor of Architecture at the Royal Academy, and in that capacity delivered learned, thoughtful and suggestive lectures on the history of the art. One set of these, the lectures on "Byzantine Architecture," were reprinted in full in the first volume of the Architectural Record. The subject had great attractiveness for him, especially the eligibility of Byzantine as a starting point for modern work. He was of the opinion of William Morris and Russell Sturgis that the interior of St. Sophia is the most beautiful

in the world. He had investigated it with great care, and he had also paid much attention to the other remains of Byzantine art in Turkey, especially with a view to the applicability of their architecture to modern requirements, though he by no means approved of anything like literal reproduction of them for modern purposes. He said emphatically, "we want architecture, not archaeology." In fact his architectural creed was much like that of Viollet-le-Duc,—"I am convinced that we can bring the taste of this generation to perfection by making it reason." His sympathies went out to every other traveller on the same path. The late Leopold Eidlitz, of New York, owed to the sympathetic interest of Professor Aitchison in his work, "The Nature and Function of Art," that virtual "crowning" of the work which was involved in the election of its author to an honorary membership of the R. I. B. A.

**THE
PICTURE
OF A CITY**

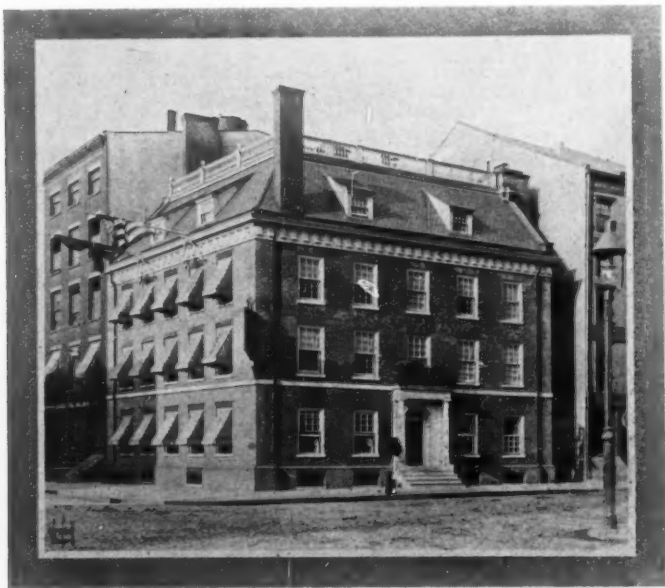
It is curious to note, as one comes over Harvard Bridge to Boston, what a city of red brick Boston is. It is like London in that respect, as very likely has been remarked before, for the likeness could hardly go unnoticed. In New York, however, as also in Paris, lighter tones predominate—stone, and buff colored brick, and white paint. The comparison is made, of course, between the like parts of the cities—that is to say, between the more fashionable parts, for the section that one sees from Harvard Bridge is as aristocratic as any in Boston. But there is a change at work in the Back Bay. It has not yet reached the river front, but it will spread to that. It is the change to the same light colors which New York uses—to a like Beaux Arts character. Perhaps the contrast is as marked as it is because from the bridge one sees old Boston, and in the more fashionable parts of New York one sees new New York. But whatever the explanation, the city-view one gets from the bridge is unusually clear cut and satisfactory. It might stand for an abstract conception of a city. There is the low hill, dome crowned; the many towers and fluttering flags; the crowded houses, and at night the long lines of lights. Looking from the farther half of the bridge, the even waterfront thrusts no confusing details into the picture. It is a view of a city—not necessarily Boston, except as no other city presents just that sort of view. The people on the esplanade, watching the "matchless

sunsets," or the lines of bridge lights and the dancing waters, by no means occupy the only interesting viewpoint.

**BOSTON
WINDOW
GARDENS
OFFICIALLY
DISAPPROVED**

The Board of Street Commissioners of Boston have refused this season to issue the usual permit to the big Filene department store to install the window gardens that for some time have been an attractive feature of the exterior of that establishment. In an interview, the chairman of the Board is quoted as saying that "there are altogether too many of the overhanging objects in the business district of Boston"—an opinion that is probably not generally shared, if "objects" explicitly refer to window gardens. If the Commissioner referred to overhanging signs, one would think that it might be possible to distinguish in the rules between a projecting sign and a box of flowers on a win-

dow sill. And it might be a good thing to show the Commissioners photographs of the business streets of London—a considerably more important city than Boston—or of Berlin, or other Continental cities, where the window gardens on commercial structures are a beautiful feature that always impress Americans very strongly. Even New York has learned to lay a good deal of stress on the decorative value of the window garden, and finds it coming more into use—and Boston is to a large extent a summer city, thronged with tourists in hot weather. Some spice is added to the action of the Commissioners, through the fact—which possibly has no bearing on the case—that Mr. Filene is head and foremost in the Boston-1915 movement, and that the refusal is ostensibly based on the high civic ground that the Commissioners desire to encourage the beautifying of the city and believe that the safest way to do this is to prevent "the installation of objects which obstruct the view of the pedestrian, or in any way detract from the appearance of the buildings themselves."



A GOOD EXAMPLE OF COLONIAL ARCHITECTURE.